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THE UNIVERSITY OF ALBERTA

ADOLESCENT GIRLS' PERCEPTIONS OF AND PREPARATION FOR MENSTRUATION

by

BARBARA-ANN JANES

A THESIS

SUBMITTED TO THE FACULTY OF GRADUATE STUDIES AND RESEARCH

IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE

OF MASTER OF NURSING

FACULTY OF NURSING

EDMONTON, ALBERTA

FALL 1987

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The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies and Research, for acceptance, a thesis entitled ADOLESCENT GIRLS' PERCEPTIONS OF AND PREPARATION FOR MENSTRUATION submitted by BARBARA-ANN JANES in partial fulfillment of the requirements for the degree of MASTER OF NURSING.

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To my mother, Barbara Janes, who has been so understanding and supportive of all my many adventures.

Abstract

Menarche is a universal event that is experienced by every adolescent girl in the early period of puberty, however, in Alberta there is no information available about this experience for adolescent girls. The main objective of this study was to determine how adolescent girls viewed the preparation they received for menarche and how they coped with menstruation in daily life (of which school is an important part). Their perceptions of the adequacy of the environmental conditions and facilities that they had to contend with at school while menstruating, were also assessed.

The method of data collection for this study were two paper and pencil questionnaires: the Menstrual Perceptions Research Tool (MPRT) and the Menstrual Attitude Questionnaire (MAQ). A sample of 141 respondents were obtained from three Catholic schools in a small city in Alberta. The mean age of the sample was 12.4 years and 47% of the subjects were postmenarcheal. The qualitative information obtained from the opened-ended questions in the MPRT plus the data from the question and answer period were analysed using content analysis. Descriptive statistics were used to present the data obtained from the multiple-choice questions of the MPRT and the Likert questions of the MAQ.

The two most important themes apparent in this research are that adolescent girls are not well prepared for menarche and that school facilities do not support the girls in their adjustment to menstruation by providing the means to assist them in maintaining their privacy and help them cope. Development of an adequate menstrual education program and being an advocate for the girls by notifying the school board of the necessary changes required to the bathroom and changing room facilities are two important areas of concern for school nurses.

Further research in the area should focus on obtaining information from adolescent

girls in other target groups, for example those with special needs or of a different culture. The more information that is known about the experience of menarche for adolescent girls, the better prepared subsequent generations of adolescent girls will be.

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I. Introduction

Statement of The Problem

Many authors believe that menarche is the single most important event of puberty for girls, marking the turning point in the transition from girl to woman (Brooks-Gunn & Ruble, 1983; Koff, Rierdan, & Jacobson, 1981; Rierdan, 1983; Ruble & Brooks-Gunn, 1982). In spite of this, little is known about the menarcheal experience. This may be because in our culture menstruation is considered private and embarrassing, and communication about the topic is limited. As a result, adolescent girls may not be as prepared as they could be for such an important life event. In Alberta, it is not known how adolescent girls perceive the preparation they received for menarche or what particular needs they have regarding preparation for the experience.

Some investigators suggest that adequate educational preparation for menarche may correlate with a more positive response to the menarcheal experience (Golub & Catalano, 1983; Koff, Rierdan, & Sheingold, 1982). However, Whisnant and Zegans (1975) discovered that although girls in their sample reported themselves to be intellectually prepared they still experienced emotional distress at menarche. Woods, Dery, and Most (1982) conducted a retrospective study involving 193 women and found that those who felt surprise at menarche were more likely to have menstrual-pain related symptoms. Recently, Doan and Morse (in press) procured responses from adolescent girls about their preparation for menstruation and found that many were dissatisfied with the information they received. Negative feelings about menstruation were reported by 69% of their sample, and approximately 9% reported they were unprepared for menstruation. It is important to assess the perceptions of adolescent girls in Alberta about the preparation they received for the event of menarche. If the preparation is perceived to be inadequate this has implications for menstrual education.

Although the menstrual cycle is an event which every girl experiences, very little research has been done on how the adjustment to menstruation affects the daily life of adolescents or how the information received at school and the school facilities ease this adjustment. Doan and Morse (in press), in their Ontario study, found that many girls assessed the school facilities (such as the bathrooms) to be inadequate for maintaining privacy contributing to feelings of embarrassment and increased stress during menstruation.

Information about preparation for menarche and coping with menstruation in daily life clearly needs to be addressed. This increased information utilized by community health nurses involved in menstrual education programs may help adolescent girls feel more prepared for menarche and cope better with the demands of menstruation. The purpose of this study therefore, is to obtain perceptions from adolescent girls about menstruation and examine seven variables (coping, preparation, feelings, symptoms, attitudes, communication and school facilities) that may influence their adjustment to the experience. Paper and pencil questionnaires were used to obtain this information and therefore, adolescent girls were able to answer the questions in a non-threatening environment where no one would know how they responded. As well, they did not have to be concerned about *'right'* responses in front of their peers or the investigator.

Menstrual Education in Alberta

Until recently, menstrual education has been taught to adolescent girls in Alberta schools primarily by the community health nurse. In some schools teachers were also involved. At present, menstruation is a topic included in the sexuality theme of the school health curriculum to be taught by the school teacher. Although the sexuality theme has been approved by Alberta Education Department to be taught in the schools, because it is an optional theme, it is up to each school board to give approval as well. Once approved by the school board, the parents are approached and must indicate if they

want their child to attend these classes. The concept of menstruation is initially presented in grade four and is included in the sexuality theme up until grade nine. In the guidelines for teachers it is suggested that trained professional in the community may be involved in the teaching of some classes. Although the situation varies from school to school, the community health nurse is frequently invited as a guest speaker to teach the class on menstruation.

Definition of Terms

In this study the following terms are defined:

Menarche : The first menstrual period of an adolescent girl.

Menstruation : The monthly flow of blood from the uterus.

Premenarcheal girls : Girls who have not yet experienced menarche.

Postmenarcheal girls : Girls who have experienced menarche.

School Facilities: The environmental conditions and facilities provided at school to manage menstruation.

Feelings : Reported thoughts and emotions of the adolescent girls that are associated with the reaction to and management of menstruation.

Preparation : Information and conditions that relate to preparing a girl for menarche.

Daily life activities :

Events that adolescent girls participate in during a normal day of their life; this includes activities at school (such as gym class), after school activities (for example Pathfinders, gymnastics etc.) and weekend events (e.g. dances or shopping).

Coping with menstruation :

Coping is defined by Lazarus (1976) as "what the person does to handle stressful or emotionally charged demands" (p. 74). Coping can be viewed as a response that could either be psychological or behavioral efforts affecting the

overall adjustment to the demand. In this study, coping will refer to behavioral activities that are carried out to adjust to the demands of menstruation.

Communication :

In this study, communication will refer only to the particular people with whom adolescent girls discuss menstruation.

Symptoms:

The physical and affective feelings that may be experienced during menstruation.

Community Health Nursing:

Promotes and preserves the health of populations through assisting individuals, families, groups, and communities to attain optimal health. Community health nurses strive to:

- provide family -centered health services throughout the life span.

- facilitate continuity of service by their generalist role.

-deliver services where clients live, work, play, and go to school.

recognize normal developmental stages, life changes, and situational stresses, and anticipating potential health needs as they may arise in a client's development. (Alberta Standing Committee on Community Health Nursing, 1986).

II. Review of the Literature

Menarche is a universal experience for adolescent girls and an important marker of pubertal status, but surprisingly, it is only in recent years that the emotional aspects of menarche have received attention from researchers. The purpose of this literature review is to summarize what is known about the experience of menarche thereby demonstrating how this study will fill a part of what is not known and also expand upon what is known. The literature review includes a short overview about the developmental period of adolescence and a discussion of five factors that encompass the dimensions associated with adolescent perspectives of menstruation.

Adolescence

Adolescence is one developmental stage in the life span during which the maturational process of puberty occurs. Mitchell (1986) has divided adolescence into three substages of early, middle and late, with the argument that due to the emotional, cognitive and physical growth that occurs during this period differences exist between individuals at the early and late adolescent substage. One cannot generalize about the behavior of a thirteen-year-old by studying the behavior of an eighteen-year-old.

According to Golub (1983), menarche, on the average, occurs at 12.8 years, an age which falls within the period of early to middle adolescence. During this stage, early adolescents are just at the edge of childhood and at the beginning of adolescence, sometimes feeling, looking and thinking as a child then as an adolescent (Mitchell, 1986). For the early adolescent girl, puberty starts during this time with the onset of sexual maturity characterized by the commencement of feminizing changes such as breast development and growth of pubic hair. Although menarche occurs as one of the latest events of puberty, it is considered to be probably the single most important occurrence for the girl.

In addition to the physical manifestations associated with puberty, psychological and cognitive changes are also apparent. In terms of cognitive development, the early to middle adolescent girl is at the stage of overlap between concrete operations (reasoning processes become logical) and formal operations (ability to apply logic to hypothetical problems) (Piaget, 1963). The importance of understanding the cognitive abilities of adolescent girls is vital in the planning and teaching of menstrual education.

Psychologically and emotionally, the early and middle adolescents have similar features. General preoccupation with the physical appearance of the body, a strong need for peer acceptance and approval and egocentrism (obsessed with the 'self') are characteristics of these age groups (Mitchell, 1986). One aspect of egocentrism is that of the imaginary audience: the adolescent girl feels that everyone is watching her when carrying out various everyday tasks. Another component of egocentrism is the personal fable which involves a story about the self where the central theme is centered around one's uniqueness or greatness. These psychological features of adolescent girls are also important to consider when preparing them for menarche and helping them cope with the experience of menstruation.

Meaning of Menarche

Menarche is a biological event that occurs in puberty, but unlike other pubertal changes that happen slowly, menarche occurs suddenly and without warning (Grief & Ulman, 1982). Several researchers believe that it is the menarcheal event around which the biological and psychological changes of puberty are organized and integrated signifying the passage from childhood to womanhood (Brooks-Gunn & Ruble, 1980; Dashiff, 1986; Koff, 1983; Ruble & Brooks-Gunn, 1982; Whisnant & Zegans, 1975). Menarche is also discussed as an event that precipitates a change in the body image of the adolescent and is a turning point in the adolescent girl's acceptance of herself as a woman (Hart & Sarnoff, 1971; Koff, Rierdan, & Silverstone, 1978; Rierdan & Koff,

1980).

The significance of menarche is different for pre- and postmenarcheal girls. Whisnant and Zegans (1975) found that the premenarcheal girls in their study anticipated that menarche would be a sign that they were grown up, and they expected that their mothers would treat them differently; whereas, the postmenarcheal girls reported that they were *'the same person'* after menarche. Similar results were found by Koff, Rierdan, and Jacobson (1981) in that premenarcheal girls expressed positive feelings about menarche because it signified maturity accompanied by the privileges of growing up. On the other hand, the notion of *'growing-up'* seemed insufficient to the postmenarcheal girls who were more worried about altered relationships with family and peers as well as concerned about to conceal the fact that one was menstruating.

Because menarche is experienced by all adolescent girls, it serves as a reference point with which to compare oneself with other girls or be compared to others (Brooks-Gunn & Ruble, 1983; Dashiff, 1986). For the adolescent girl, the concept of *'being on time'* (that is within a given age range) as compared to her peers has been related to a more positive response to menarche; whereas, being *'off time'* (i.e., early or late) can result in negative psychological consequences and poorer adjustment to menstruation (Rierdan & Koff, 1985). Surprisingly, being late for menarche, although *'off time,'* results in a positive response to menarche because now the adolescent girl no longer feels deviant from her peers and is assured of her normality (Rierdan & Koff, 1985).

Although many girls view menarche as a sign of maturity, menarche is often portrayed in educational materials as a hygienic crisis rather than a maturational event (Whisnant, Brett, & Zegans, 1975). The focus of these educational materials is on girls keeping themselves clean and odor free, yet the importance of the menstrual event as being significant to becoming a woman is not stressed. Acknowledging that menarche is

an important point in female development seems important enough to incorporate into the preparatory teaching about menstruation to adolescent girls because of the intimate link between menstruation, womanhood and sexuality.

The effect of menarche on subsequent menstrual attitudes seems to be an area of disagreement in the literature. Woods, Dery, and Most (1983) found that surprise and negative recollections of menarche were not related to current menstrual attitudes. Brooks-Gunn & Ruble (1983), however, point out that if perceptions of the menarcheal event are negative, then this may have long term implications for subsequent menstrual experience. The view of the educator may affect the preparation girls receive for menarche. If the most prevalent view is that early experiences do not affect long term attitudes, then possibly not as much effort will be expended to influence the menarcheal experience in a positive way.

Sources of Information About Menstruation

When conducting research in the area of menstruation, investigators frequently ask the subjects how they learned about menstruation. The assumption underlying this research is that this may be a factor that influences the adolescents' attitudes and expectations of the menarcheal event. For example, the findings from the Brooks-Gunn and Ruble study (1983) indirectly suggest that mothers convey information about menstruation that results in positive attitudes; whereas, the information obtained from peers is more likely to result in negative attitudes and expectations.

Typically menstrual education is considered the responsibility of the family, and not surprisingly, the mother has been cited as the primary provider of information (Dunham, 1970; Ernester, 1977; Larsen, 1961; Milow, 1983; Rierdan, Koff, & Flaherty, 1983; Thornburg, 1972; Whisnant & Zegans, 1975; Williams, 1983). The participation of the father regarding his daughter's menstrual education appears to be nonexistent (Aman-Gainotti, 1986). Although their contribution seems to vary, older sisters are also

seen as another source of menstrual education within the family. In a study by Brooks-Gunn and Ruble (1983), two-thirds of the girls in their sample of 759 reported receiving information from their sister as compared to less than ten percent in a study carried out by Whisnant and Zegans (1975).

Another common source of menstrual information is school health classes, and especially in the past two decades, this source has been often cited as a source of information by adolescent girls (Brooks-Gunn & Ruble, 1983; Dashiff, 1986; Golub & Catalano, 1983; Peterson, 1983). In fact, Golub and Catalano (1983) found in their retrospective study of women aged 18 to 45 years that the younger women reported receiving more information at school than the older women. Peterson (1983) discovered that 66% of the sample in her study reported school as the most prevalent source of menstrual information. This could indicate that the school is playing a more important role in preparation for menstruation for adolescent girls in this decade as compared to earlier years.

Outside the family, female friends are a major source of menstrual information (Aman-Gainotti, 1986; Brooks-Gunn & Ruble, 1980; Whisnant & Zegans, 1975), with as many as three-quarters of the girls in the Brooks-Gunn and Ruble study (1980) having received information from their peers. Media sources are also high on the list, including items such as books, pamphlets and films which are often used in school health classes (Brooks-Gunn & Ruble, 1983; Larsen, 1961; Peterson, 1983; Rierdan, Koff & Flaherty, 1983; Whisnant & Zegans, 1975).

Although the question of who prepares the adolescent for menstruation may have been answered, little is known about the adequacy of the information provided by each source. Whisnant, Brett, and Zegans (1975) reviewed materials provided by manufacturers of sanitary products. They found that the information was related at a level too abstract and advanced for adolescent girls and that it did not focus on the actual

experience of menstruation. Also, the pamphlets did not include the emotional aspect of menstruation, but often provided mixed messages of congratulations and secrecy and mainly discussed the hygienic aspects of menstruation. One other study (Doan & Morse, in press) examined what girls thought about the school maturation lecture in terms of its adequacy of preparation. The girls in their sample reported the classes to be inadequate for all they needed to know about menstruation. Some of the reasons cited by the girls for this inadequacy were that the film shown in the health class gave too much information too quickly, that there were boys present in the class (they would prefer only girls), and that the explanation was insufficient for them to totally understand what was being taught. The perceived adequacy of the information provided to adolescent girls is an area where further research is needed.

Preparation for Menstruation

Preparation for menstruation is a multi-faceted issue, and one that has an important impact on the experience of menarche for an adolescent girl. The studies that examine preparation for menstruation generally conclude that the more adequately prepared a girl is the more positive her experience with menarche will be (Golub & Catalano, 1983; Grief & Ulman, 1982; Koff, Rierdan, & Sheingold, 1982; Rierdan, 1983; Ruble & Brooks-Gunn, 1982). In fact, Rierdan (1983) suggests that preparedness may be a more critical factor in influencing initial menstrual experience than age. Adequate preparation has also been associated with less subsequent menstrual distress (Brooks-Gunn & Ruble, 1983; Grief & Ulman, 1982). Some researchers have found, however, that although girls had reported themselves to be intellectually prepared they still reported distress and upset at menarche (Koff, Rierdan, & Jacobson, 1981; Whisnant & Zegans, 1975). These findings seem to support the belief of Deusch (1944) that menarche must inevitably be traumatic even if the girl has received intellectual knowledge about menstruation. However, the findings may also suggest that adequate

preparation for menarche consists of two components: an intellectual (cognitive understanding) and an affective (emotional) aspect (Rierdan, Koff, & Flaherty, 1983).

An area concerning preparation that causes controversy is the question of who should prepare adolescent girls for menstruation: is it the responsibility of the parents or the school? This question was discussed by Rogers (1953) and is still a current problem today thirty years later. Many people believe it is the role of the parents to teach maturational development; however, this may not occur for several reasons, such as embarrassment, lack of knowledge or a poor mother-daughter relationship. Thus, the adolescent girl must rely on other sources for her information which may not be adequate, resulting in misinformation or lack of information. Dashiff (1986) suggests that more appropriate methods for preparing young women for menarche need to be developed for the schools in an effort to provide girls with adequate information and, hopefully, a positive experience with menarche. One recommendation of Doan and Morse (in press) to help the girls cope with menstruation was to provide several teaching sessions about menstruation. The typical one-hour, one-shot class contains too much information for the adolescent girls to assimilate all at once.

One factor that may influence preparation for menarche is the age at which the girl receives preparatory information. It has been suggested that the older the girl is when she receives the information the more negative her attitude toward menstruation will be (Dunham, 1970). This negative attitude is expected to diminish over time as the adolescent matures.

Several researchers have asked women themselves what they consider adequate preparation for menstruation (Brooks-Gunn & Ruble, 1980; Doan & Morse, in press; Koff, Rierdan, & Jacobson, 1981; Rierdan, 1983; Ruble & Brooks-Gunn, 1982). Typical responses involved emphasizing the individuality and variability of the menstrual experience, the normality of menstruation, the emotional aspects, providing the factual

information and giving a balanced view which presents menstruation as a positive event, as well as, one that had some negative aspects. Assessment of the perceived adequacy of information received from various sources by the adolescent girls is a beginning step in determining overall adequacy of preparatory menstrual information.

Coping with Menstruation

Coping is generally referred to in the literature as an active effort that is carried out to manage stressful demands encountered in the environment (Lazarus & Folkman, 1984; Moos, 1986). Specifically, Lazarus & Folkman (1984) define coping as "constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person" (p. 141). In other words, an individual tries to arrive at a solution to a problem that will enable one to get along as best one can. Coping can consist of many aspects such as searching for information, preparing or planning for problems, taking appropriate action to meet the demand and maintaining a positive outlook (Lazarus, 1976). The concept of coping is a multidimensional and involves many aspects, such as the individual's personality , the environment, and the type of demand or stress encountered. One key point, however, that may compromise coping efforts is if an individual believes she has no control over a situation (Lazarus & Folkman, 1984).

For adolescent girls, menstruation is a demand that is new and stressful, and learning to cope with the tasks associated with managing menstruation can be difficult. How adolescent girls cope with menstruation in daily activities, especially at school, is an area that has received little attention by researchers. Only two studies were available that examined the aspect of adolescents coping with menstruation (Doan & Morse, in press; Havens & Swenson, 1986). In the study by Doan & Morse (in press), the girls reported the school bathroom facilities to be inadequate because these facilities interfered with their ability to keep the fact that they were menstruating secret. The act of

concealing menstruation from others was an important aspect of coping because the girls reported that they were embarrassed if people knew. Such things as lack of privacy when obtaining napkins, no doors on the cubicles and disposal bins outside the cubicles contributed to feelings of stress and embarrassment. It is important to find out if this situation is prevalent in other schools in Canada because it is a responsibility of professionals, including community health nurses, to ensure that the school situation does not impede the ability to adjust to the experience of menstruation. In fact, the school should try and help ease this adjustment as much as possible.

A recent study in Hawaii by Havens and Swenson (1986) supported the findings by Doan and Morse (in press). These researchers suggested that strategies for coping with the inconvenience of menstruation should be incorporated into the learning situation and this would help avoid potentially embarrassing situations for the adolescent girls.

Some adolescent girls also have to cope with the physical and emotional symptoms associated with menstruation. Such things as feeling sick, having cramps and experiencing mood changes may be aspects of menstruation that cause confusion and distress in adolescent girls. Adequate explanation to adolescent girls of why these changes may occur and how to best cope with them may have a positive effect on the adjustment to menstruation.

Patterson and Hale (1985) investigated the concept of *'making sure,'* which they defined as "the process that enables women to continue their daily activities knowing that the current menstrual care practice is effective and that future menstrual demands can be met easily and readily" (p. 24). They identified three components of the *'making sure'* process: attending to the menstrual demand, calculating appropriate action to meet the demand and juggling time, space and supplies. Women in their study indicated that making sure was difficult to accomplish in their early experiences with menstruation as they had not yet learned the appropriate processes. Adolescents, therefore, are faced

with the problem of having to learn the process of *'making sure'* in an environment, such as school, that could be impeding the development of this important coping mechanism.

Communication about Menstruation

Menstruation is a normal biological process occurring in the female body, yet a prevalent taboo that does exist today is that related to communication: menstruation should be discussed with only females (Ernester, 1977; Williams, 1983). This taboo is a reflection of sociocultural norms and is associated with the negative attitudes regarding menstruation generated by society. There is an unspoken rule that women should never talk about *'that time of the month'* in public and, in fact, indiscriminate communication with individuals of either sex is perceived to be risky (Ernester, 1977). Ernester (1977) found the girls in her study discussed menstruation with those friends they knew could keep a secret.

Although commercials on television and advertisements in magazines feature feminine protection, the underlying message is the portrayal of menstruation as something to cover-up and conceal (Toth, Delaney, & Lupton, 1981). Concealment of menstruation is encouraged as a way to keep secret the fact that one is menstruating, and this silence has hampered communication (Mckeever 1984). Ruble and Brooks-Gunn (1982) and Whisnant and Zegans (1975) found that post-menarcheal girls tended to be quite secretive upon reaching menarche, and this may be due to the messages they receive about secrecy and concealment of menstruation when being prepared for menarche.

A concern of adolescent girls is consistent with the communication taboo: who to tell when menarche occurs? Girls in the Doan and Morse study (in press) reported feelings of being afraid of rejection if their friends knew, not knowing how to tell their parents and not wanting to tell anyone. Although many girls had either told their friends or were

planning to tell them, mothers are often cited as the first individuals informed by their daughter when menstruation begins (Andrews, 1985; Golub & Catalano, 1983; Havens & Swenson, 1986; Koff, Rierdan, & Jacobson, 1981; Whisnant & Zegans, 1975). Fathers, brothers and boyfriends were rarely told, indicating a reluctance to discuss the experience with the opposite sex (Brooks-Gunn & Ruble, 1983; Williams 1983).

Brooks-Gunn and Ruble (1983) believe that socialization within the family may play a role in the acquisition of certain beliefs and attitudes about menstruation by the daughter. In their study, they observed that when the father was told about his daughter's menarche she reported less severe menstrual symptoms. This may suggest that in a family where discussion about menstruation is more open, positive attitudes about menstruation may prevail and be adopted by the adolescent girl. Therefore, the communication process concerning menstruation (that is, who the girls tell about menarche) may be a reflection of their menstrual attitudes.

Conceptual Framework

The framework for this study has been developed from a health education perspective. Health education is a learning process that involves the transmission of information to motivate individuals and help them adopt and maintain healthful practices and lifestyles (Murray & Zentner, 1985). Health educators are not simply concerned however, with the process of disseminating health information but also with the characteristics of learners such as their knowledge, values, attitudes, health practices and emotional status. An individual who has a positive concept of self is more likely to practice health education beliefs and lead a healthy lifestyle. The environment of individuals is also of importance as this may be a barrier to their learning and/or contain obstacles that prevent them from effectively being able to carry out what they have been taught (Pender, 1987).

Health education is carried out by nurses in varied settings. Patients in the hospital,

clients in the community, individuals in their work environment or students at school can all be potential recipients of health teaching by nurses. Therefore, although the goal to be achieved by the nurses involved in health education would be the promotion, maintenance, or restoration of health (Murray & Zentner, 1985), the objectives to achieve this end will be different depending on the client and the focus of the teaching. Teaching parents about infant nutrition, stressing the need for safety in a factory, helping a client with a colostomy to maintain a positive self image, and anticipatory guidance with adolescents concerning developmental tasks, are all directed to the enhancement of health.

The framework of health education is the context in which menstrual education will be discussed. Menarche is an inevitable event of every adolescent girls' life and because of this, appropriate health education can prepare them for its occurrence and, as well, for handling the continuing cycle of menstruation. Learning how to cope with menstruation, a natural body function, is an important developmental task for adolescent girls but the simple transmission of information will not alone assure this desired outcome. Several factors have an impact on how well a girl adjusts to the tasks of menstruation and seven of these were addressed in this study: coping, preparation, feelings, symptoms, attitudes, communication and school facilities.

From the literature reviewed it is apparent that adolescent girls have a range of emotional responses to menarche which vary from disgust and fear to excitement and happiness (Doan & Morse, 1985). It is not known why adolescent girls respond differently to menarche but there is some evidence to suggest that it could be influenced by several factors, such as the adequacy of information provided for preparation of menarche, and girls age at menarche. For example, positive responses may be experienced if preparation is perceived to be adequate by adolescent girls. Age may effect menarcheal response. The older (and therefore more mature) the girl is when she

starts to menstruate, the more positive her response to menstruation may be. Menarcheal status could also have an effect on perceived response to menarche in that it could be influenced by practical experience with the event. Emotional responses to certain tasks and activities that are carried out during menstruation are also significant to explore. If embarrassment is a common feeling associated with the buying of pads or tampons, it could have an impact on how an adolescent girl copes with menstruation.

Some gaps and conflicting information were revealed in the literature reviewed especially in the area of menstrual education and coping with menstruation and for this reason the study will be mainly descriptive. As described by Lazarus (1976) coping can be manifested in many ways depending on the particular demand and the personal characteristics of the individual. There may be positive relationships between the coping strategies used by adolescent girls and their response to menarche (that is, positive or negative), attitudes about menstruation, preparation received for menarche, environmental conditions, and their chronological age. There is enough evidence to suggest that the coping skills of adolescent girls may be enhanced if the preparation they receive for menarche is adequate. Because the girls acquire information from various sources and use this information in their day to day management of menstruation it is important that this information be accurate. Menstrual education programs can facilitate the preparation for girls, and ease menstrual coping.

The perceived attitudes of adolescent girls may also affect the way they respond and cope with menstruation. Promoting comfort with one's sexuality may be an important component of the development of positive attitudes about menstruation and conversely, having negative attitudes may reflect a denial of womanhood. As well, the symptoms experienced by adolescent girls during menstruation may be linked to menstrual attitudes consequently affect the coping response. Communication about menstruation may also be connected to menstrual attitudes. Negative attitudes may result in silence about

menstruation with both males and females and, thus, limit the resources available to help adolescent girls cope and adjust to menstruation.

The coping response, however, may be affected by variables beyond the control of the adolescent girl such as the environment and facilities at school, which could be perceived as less than optimal, and thus, increasing stress when coping with menstruation. Experience with the tasks of menstruation, growing older and maturing may also increase their coping skills and reflect an increased adjustment to menstruation.

The information obtained in this study will be valuable to community health nurses in their interactions with adolescent girls or their parents with the goal of promoting adjustment to the developmental task of menstruation, and, more specifically, to increasing the coping strategies of adolescent girls. The more information that is known about the experience of menstruation for adolescent girls the better prepared subsequent generations of adolescent girls will be for menarche and the continuing cycle of menstruation.

Research Questions

The following research questions will be addressed :

1. a) What are the perceptions of adolescent girls toward the adequacy of the information they have received in preparation for menarche at school and from reading material such as books and pamphlets?

   b) What are the perceptions of adolescent girls regarding preparation for and coping with menstruation?

   c) What information do adolescent girls consider most helpful to themselves and other girls in preparing for menarche?

2. a) What are adolescent girls' perceptions about the adequacy of the school facilities?

b) How do adolescent girls cope with daily life activities (of which school is an important part) when menstruating?

3. a) What are the common attitudes of adolescent girls about menstruation?

b) Is there a positive relationship between the adolescent girls' attitudes about menstruation and their coping with menstruation?

c) What are the reported feelings of adolescent girls regarding menstruation and about the activities that need to be carried out when menstruating?

4. a) Do adolescent girls perceive menstruation to be a difficult topic to discuss with others?

b) What common terms are used by adolescent girls to describe menstruation?

III. Method

Generally, the research approach selected is based upon two criteria: first, the nature of the problem and, second, what is already known about the phenomena under study (Field & Morse, 1985; Morse, 1986). Because some research has been done in the area of menstruation, the research method for this study was primarily quantitative. This researcher examined seven variables associated with menstruation, relationships between these variables and, in addition, tried to describe these relationships. Diers (1979) describes this level of research as relation-searching or situation depicting. The variables being studied have been identified by previous researchers, but the relationship among the variables or between each variable and the identified concept under study, menstruation, have not yet been described. This researcher worked deductively from what is already known to explore how this knowledge was related to other variables (Wilson, 1985).

Data Collection

Instruments

Menstruation is considered a topic not to be discussed in public, and often, communication about it is taboo. Several problems inherent in the study of menstruation, especially with adolescent girls, have been identified, for example, giggling in group interviews or teasing by other girls in the case of individual interviews can interfere with data collection (Doan & Morse, 1985). Therefore, the method of data collection for this study was paper and pencil questionnaires which enabled the investigator to obtain information about a sensitive issue. Also, the questionnaires provided for standardization of information in order to see relationships between variables.

The Menstrual Perceptions Research Tool (MPRT) (see Appendix A) was adapted

for this study, with permission, from an open-ended questionnaire previously developed by Koff, Rierdon, and Jacobson (1981). This adaptation allows the MPRT to be distributed to a larger sample and to be scored on the computer. The MPRT consists of 47 multiple-choice questions that are based on the experiences of a fictitious girl called Ann. The use of this format is a form of projective identification. Projective identification is "a process by which feelings congruent with one's own are induced in another" (Ogden, 1979, p. 362). The use of a third person in the questions is believed to elicit responses that may otherwise be too threatening to reveal in the first person context (Murstein, 1965). The multiple-choice questions revolve around the projective technique of sentence completion. The general purpose of sentence completion is to obtain responses from subjects who would be unable or unwilling to recognize or express their feelings and attitudes about a particular topic in direct communication (Edwin & Bellak, 1959; Murstein, 1965). Traditionally, sentence completion does not include forced choice responses; however, the answer chosen by the subjects, out of those provided, are believed to express their own personal feelings, wishes and intentions (Shouval, Duek, & Ginton, 1975).

When developing a multiple-choice format of a sentence completion questionnaire an important point is to provide answers that the subjects themselves would give (Shouval, Duek, & Ginton, 1975). In keeping with this, the sentence stems and responses were derived from a review of the literature and personal experience; however, the primary source was the results of a study by Doan and Morse (in press; Doan & Morse, 1985). Their study was qualitative and reflected the language used by adolescent girls when they discuss menstruation. These data are valid because of the inductive and unbiased qualitative approach. Data collection and analyses techniques used in qualitative research are the two aspects that result in high internal validity (Le Compte & Goetz, 1982). The multiple-choice questions in the MPRT have been grouped into six categories, which,

from a review of the literature, encompass the dimensions associated with the adolescent perspectives of menstruation. These six categories are as follows: feelings, symptoms, preparation for menstruation, school facilities, coping and, finally, communication about menstruation (see Appendix A).

Four open-ended questions comprised the qualitative portion of the questionnaire and are stated in the first person context. As these open-ended questions do not relate to personal experience, it was anticipated that the girls would not feel threatened or embarrassed to answer them in this context.

Clarity and readability of the MPRT were assessed by eight content experts in the field of menstruation: five nurses in the area of community health, a university professor teaching in the area of maternal-child nursing, one researcher involved in the study of menopause and a colleague studying in the maternal-child area. The MPRT was also subjected to review by one class of grade six girls during the pre-test phase to determine the clarity and readability of the questions. Minor wording changes were made to the questions in the MPRT after receiving feedback from these two sources.

Another tool, a modified version of the Menstrual Attitude Questionnaire (MAQ) (see Appendix C), was utilized to determine the attitudes of the girls in the sample about menstruation (Brooks-Gunn & Ruble, 1980). Originally, this scale was designed to be used with adult women, but it was modified by Doan (Doan & Morse, in press) for use with adolescents, and it was this form that was utilized in this study. The modified MAQ is comprised of 43 statements that were rated on a five-point Likert scale format. Five attitude factors were examined with this questionnaire: menstruation as a psychologically and physically debilitating event, as a natural, bothersome and predicted event, and as an event that does not and should not affect one's behavior.

The final section of the questionnaires included questions to obtain biographic data about each respondent (see Appendix D). Information on the menstrual status of each

subject and living arrangements with their mother and older sister was also requested in this section.

Reliability and Validity

Reliability and validity are two major criteria used to assess an instrument's quality and adequacy. Reliability reflects accuracy, consistency and stability over time with which the instrument measures the intended variables under certain conditions and with certain groups (Polit & Hungler, 1987; Shelley, 1984; Wilson, 1985). Reliability of the MPRT was established by a repeated administration of the questionnaire. One class of grade six girls responded to the questionnaire and then, three weeks later, completed the questionnaire again. The initial completion was done by 22 subjects, but due to two absentees during the second completion, analyses could only be done on 20 completed questionnaires. The rate of agreement was examined between the subjects' responses on time one and time two. This was accomplished by matching the responses of time one and time two and scoring the responses in such a way that a one was given if there was agreement and zero was given if there was no agreement. All the responses in which there was agreement were summed and then a proportion of agreement was calculated. The results showed that 60% of the pre-test sample had 70% to 83% agreement on their responses for the two completions of the MPRT. Over one-half of the 20 girls had more than 70% agreement which is acceptable for this study.

A reliability coefficient of alpha= .68 was calculated for the MAQ in the Doan and Morse study (in press), and because the sample in this study was similar to the one obtained in the their study (same age group), it was anticipated that the reliability would be similar for this study. The reliability for the MAQ in this study was .71 which was considered a low reliability. Internal consistency was estimated for the original MAQ, and Cronbach's alpha coefficients were high for each of the factors ranging from .90 to .97 (Brooks-Gunn & Ruble, 1980).

Validity is the degree to which an instrument is measuring what it is supposed to be measuring (Lynn, 1986; Polit & Hungler, 1987). For this questionnaire, face and content validity were established. Face validity involves subjective judgements about the measurability of the overall instrument (Wilson, 1985), and it was assessed by eight experts in the field. Content validity is discussed by Polit and Hungler (1987) as "the sampling adequacy of the content area being measured" (p. 324). Lynn (1986) describes content validity as a two stage process: the development stage and the judgement stage. The development stage for an affective instrument consists of three parts: identification of the dimensions of the variable to be examined (obtained by a review of the literature), generation of items for each dimension and, finally, arranging the items and writing them into usual format. In the second stage of content validity determination, the judgement stage, the instrument is subjected to experts to validate the content of the items, as well as, the entire instrument . In this study, step one was carried out in the design of the MPRT, and step two was carried out with experts in the field of menstruation. A panel of eight experts had to rate each item in the questionnaire according to how it reflected the construct being measured using a four point scale: not relevant, unable to assess, relevant with revisions or relevant. If the response, relevant with revisions, was chosen, suggestions were given by each expert on how they felt the item could be improved. Valuable suggestions were received, and questions in the MPRT were adjusted considering the feedback provided in terms of rewording several of the sentence stems for better clarity, dropping two questions and adding an extra response to four questions. Overall, all eight experts indicated that they considered the entire instrument to be content valid.

Sample Selection and Inclusion Criteria

The study was carried out in a small city in Alberta. The superintendent of the school board was approached for permission to conduct the study in the school district and for

permission to approach the principals of four schools in the district. The questionnaires were then reviewed by the principal of each school to see if the questions in the questionnaire were suitable for the students in their school to answer. Three principals gave permission for the study to be carried out in the their prospective school, and arrangements were then made with the teachers of the girls in grade six, seven and eight to conduct the study during class time.

The sample size of a study is usually dependent upon the purpose of the research, the design and the size of the population (Polit & Hungler, 1987; Wilson, 1985). Waltz and Bausell (1981) suggest that for a descriptive study 20% of the population would give a medium sized sample. However, it is generally suggested that a larger sample will yield more accurate results because it is more representative of the population (Polit & Hungler, 1987; Shelley, 1984; Wilson, 1985). For this study the total population to be accessed for the study was 160 adolescent girls from three schools. Therefore, for this study, a sample size of approximately 75 to 100 respondents was considered to be an adequate number; however, due to an overwhelming affirmative response rate of 88%, the total sample consists of 141 subjects.

A consent form signed by at least one parent or guardian indicating their daughter could participate was necessary for inclusion in the study (see Appendix E). Inclusion was also dependent upon the girls voluntarily agreeing to participate in the study, and the filling out of the questionnaires was their implied consent. Finally, the girls had to be in grade six, seven or eight and be able to read and write the English language.

Administration of the questionnaire was carried out by the investigator during a class period when only girls were present (alternate arrangements were made for the boys in each class). The decision to have an all-girls class was made in order to avoid situations in which teasing or questioning by the boys in regular class periods might occur and also to minimize the stress of filling out the questionnaires. The girls sat in alternate seats so

that privacy could be maintained and, therefore, they may be more inclined to respond honestly. The investigator stayed in the room after providing the instructions and distributing the questionnaires to answer any questions that arose. After the questionnaires were completed, a question and answer period was held for the girls in which the investigator answered the questions related to menstruation that were written down by the girls. These questions were analyzed qualitatively as described in the section on data analysis.

Data Analysis

Both quantitative and qualitative information were obtained. As indicated in the description of the instrument, the questionnaire is composed of six categories, and because some questions yield ordinal data (the responses can be rank ordered but there is not an equal interval between each one), and others nominal data, types of analysis used varied between categories and between questions in each category. Initially, data from the fourty-seven multiple choice questions in the MPRT were analyzed using descriptive statistics in which the frequency and the mode of responses were obtained for each question. The additional analysis for the preparation, school, coping and feeling categories was as follows:

Preparation Category

This category is comprised of 11 multiple choice questions plus five questions with open-ended responses (the qualitative information of these five will be discussed below). The responses of questions #40 to #43 were coded from one to four, and the responses chosen by the participants were added together to obtain a total score for each respondent on the perceived adequacy of the information received for preparation of menstruation (see Appendix A). The scores could possibly range from four, indicating they did not receive any form of menstrual education, to 12, which means the information they did receive was perceived to be adequate.

School Facilities Category

There are four multiple choice questions in this category (#11, 13 to #15), and the responses were coded from one to three. The respondents' answers on each question were added together to obtain a total score to indicate their perception of the adequacy of the bathroom facilities ranging from four, which is inadequate, to a maximum of 12, which means very adequate (see appendix A).

Coping Category

This category is comprised of 14 questions. Five of these, #29, #31 to #34, have dichotomous responses and were coded either one, for no attendance at a particular daily activity during menstruation, or two, which would be attendance at a particular daily activity during menstruation. The responses were added to obtain a total score ranging from five to a maximum of ten. A score of ten would indicate that daily life activities were not avoided because of menstruation (see appendix A).

Feelings Category

This section is comprised of five questions concerning emotional feelings associated with carrying out some tasks and activities during menstruation. The responses of questions #12, #16 and #30 were coded from one to three and then added together to obtain a total score that would indicate the degree of feelings of the adolescent girls toward particular activities associated with menstruation (see appendix A). A score of one to three indicated neutral feelings, four to six represented positive feelings, and seven to nine indicated negative feelings.

Once the scores had been computed, the means of the combined scores of the coping, preparation, feelings and school categories were analysed to see if there were differences between the perceptions of pre- and postmenarcheal girls in these areas. The scores for the coping category and the feelings category were both correlated with the preparation category using the Spearman rho statistic to see if a relationship existed

between these variables.

The results of the MAQ were analyzed using descriptive statistics, and in addition to calculating the frequency distribution and the mode, the mean and standard deviations were also obtained. A total score for each of the five subscales in the questionnaire was obtained and then added, with the positively worded items reversed, to obtain a meaningful score on the overall attitudes of adolescent girls to menstruation. The mean of the total scores for the pre- and postmenarcheal girls were examined to see if there were differences between these two groups regarding their attitudes toward menstruation. Also, the combined scores for each subscale of the MAQ were correlated with the scores obtained in the coping category of the MPRT using the Spearman rho statistic to see if a positive relationship existed between the attitudes of adolescent girls and the coping behaviors carried out regarding daily life activities during menstruation. For both questionnaires calculations were done to see if differences existed between the girls who were menstruating less than one year compared to the girls who were menstruating longer than one year in relation to their responses received on the questionnaires.

The qualitative data from the three short answer questions in the MPRT were analyzed using content analysis. In the initial stage of analysis, the data was placed into broad discrete categories. These categories were then surveyed for words and phrases central to each category so that adequate descriptions of the categories were attained. The frequency of the central phrases was tabulated and analyzed using descriptive statistics. Frequencies were also obtained on the responses of the five open-ended questions in the MPRT and described using descriptive statistics.

If subjects omitted some questions of any part in either questionnaire, the response was coded as missing and not included in the tabulation of the total scores for each category. The computer program of SPSSx was used to analyze the responses of each

questionnaire.

Ethical Considerations

An informal discussion was held with each school class of prospective subjects during which time an explanation was given about the purposes of the study and what participation would involve if they agreed to be in the study. Voluntary participation was stressed, but it was made clear that no one could participate without a signed consent form from at least one parent or guardian. The subjects were assured that complete anonymity would be maintained. As well, the subjects were informed that they could withdraw from the study at any time and could leave any questions blank. Each questionnaire was identified by a number at the top of each page, and it was by this number that the pre-test, post-test participants were identified.

IV. Results

In this chapter, the results obtained from the Menstrual Perceptions Research Tool (MPRT), the Menstrual Attitude Questionnaire (MAQ) and the questions discussed during the question and answer period will be presented. Descriptive statistics and content analysis, where appropriate, were used to describe the responses obtained from the participants.

Characteristics of Participants

The mean age of the sample (n=141) was 12.4 years, with 47% postmenarcheal. A summary of the characteristics of the study sample are found in Table 1.

Table 1
Characteristics of 141 Adolescent Girls

Characteristic		n	%
Grade	6	45	31.7
	7	36	25.4
	8	60	42.3
Age	11	32	22.5
	12	41	28.9
	13	52	36.6
	14	16	11.3
Menstrual Status			
	Premenarcheal	67	47.2
	Postmenarcheal	74	52.1

Menstrual Perceptions Research Tool (MPRT)

Out of the 146 questionnaires received, 141 were sufficiently completed to be used in the study. The subjects responded to the 47 multiple choice questions in approximately 20-25 minutes, with the grade six and seven students taking longer than those in grade eight. The results of each of the six categories in the MPRT (see Appendix A) will be presented individually, and the questions will be described from the perspective of how the participants thought Ann felt. The content analysis of the three short answer questions are described at the end of this section.

Feelings

As previously described (p. 3), feelings are defined as the "reported thoughts and emotions of adolescent girls that are associated with the reaction to and management of menstruation." A total of seven questions comprised the feelings category in the MPRT (see Appendix A: Table1-A).

Two questions assessed the perceived reaction to menarche: one question pertained to Ann's initial reaction, and the other related to her feelings on the first day of her period. *'No big deal'* was how one-third of the sample thought Ann would feel when she first saw her period, with *'surprised'* and *'curious* ' the next two most common responses chosen. Twenty-one percent of the postmenarcheal girls chose *'curious'* as compared to only 11% of the premenarcheal girls. Furthermore, although 12% of the premenarcheal group believed that Ann would be excited when she first saw her period, only 3% of the postmenarcheal girls reported this response. Twice as many premenarcheal (18%) as compared to postmenarcheal girls (9%) anticipated that Ann would feel scared and an almost equal number of each group chose *'disgusted and gross'* (11% and 13%, respectively).

In contrast to the feelings associated with the initial reaction to menarche, 38% of the girls reported that Ann would feel embarrassed on the first day of her period, with just

over 25% of the sample expecting that Ann would neither feel older nor different than usual (respondents could have chosen more than one answer for this question). A small percentage of the sample, approximately 9%, thought Ann would feel proud that her period had come. Again, some differences in the types of responses chosen were evident between pre- and postmenarcheal girls. Approximately 45% of postmenarcheal girls anticipated Ann would hate having her period, but only 26% of premenarcheal girls chose that response. Almost twice as many premenarcheal (11%) as compared to postmenarcheal girls (6%) indicated Ann would feel excited. Thirty-nine percent of the premenarcheal in comparison to 13% of the postmenarcheal group reported that Ann would feel grown-up on the first day of her period.

Four questions were related to some of the activities that are required to manage menstruation. A contrast was evident between pre- and postmenarcheal girls regarding the aspect of wearing a pad. Approximately 61% of premenarcheal girls anticipated that wearing a pad would make Ann feel different and strange; in comparison, just over 50% of postmenarcheal girls thought Ann would feel it was a bother. Less than 5% of the total sample thought it would make Ann proud and 16% indicated that wearing a pad would not make her feel any different.

In relation to the feelings associated with buying pads or disposing of used ones at school, over 85% of the sample believed Ann would feel embarrassed to get a pad in full view of everyone in the school bathroom, and only 9% choose the response *'no big deal.'* Only one girl, who was postmenarcheal, thought Ann would be proud to get a pad from the dispenser. The majority of pre- and postmenarcheal girls (88% and 73% respectively) expected that Ann would feel embarrassed to dispose of her pad in the school bathroom garbage. Twice as many postmenarcheal (15%) as premenarcheal girls (7%) suggested that it was *'no big deal.'* The belief that Ann would be proud to dispose of her pad in the bathroom garbage can was the response chosen by 9% of

postmenarcheal girls; only 4% of premenarcheal girls reported this response.

The feelings associated with the activity of buying pads or tampons at a drugstore was also addressed. Only two girls in the sample (one pre- and one postmenarcheal) expected Ann would be proud to buy sanitary supplies from the drugstore, and with 15% of the sample choose the response *'no big deal.'* The expectation of 64% of the premenarcheal girls was that Ann would feel a little embarrassed to carry out the task of buying pads or tampons as compared to 54% of the postmenarcheal group; however, 10% more postmenarcheal (30%) than premenarcheal girls (20%) suggested Ann would be so embarrassed she would not go.

The final question in the feelings category involved the feelings associated with attending gym class at school while menstruating. The most common response of both groups (pre=60%, post=52%) was that Ann would feel embarrassed to attend gym class because other people might notice she was having her period. In contrast, *'no different'* was how 40% of post- and 35% of premenarcheal girls expected Ann would feel during gym class. Only 8% of postmenarcheal and 2% of premenarcheal girls indicated Ann would feel proud.

The responses to three questions (#12, #16, #30) that were concerned with the feelings of buying or disposing of pads and participating in gym class were added together to get an overall score for each respondent (see Table 2). The total score was divided into three categories of neutral, positive or negative feelings with the sample categorized into pre- and postmenarcheal girls. The results have been computed from the answers of the 134 respondents who replied to all three questions.

The majority of respondents, 87%, believed Ann would have negative feelings associated with the tasks of buying and disposing of pads and participating in gym class; an equal number, approximately 7%, reported that Ann would experience either positive or neutral feelings associated with these activities. The means of the total score in the

feelings category for the pre- and postmenarcheal girls were examined to see if there were differences between these two groups in how they responded to questions #12, #16 and #30. There was not a significant difference between these two groups ($p \leq .05$).

Table 2

Perceived Feelings Toward Activities Carried Out During Menstruation

	Neutral score (1-3)		Positive score (4-6)		Negative score (7-9)		Total	
	n	%	n	%	n	%	n	(%)
Premenarcheal	2	2.8	5	7.0	64	90.1	71	53.0
Postmenarcheal	6	9.5	4	6.4	53	84.1	63	47.0
Total	8	6.0	9	6.7	117	87.3	134	

Note: missing observations=7

Communication

Five questions in the MPRT addressed the issue of communication categorized by the particular people with whom adolescents might discuss menstruation (see Appendix A: Table1-B).

Approximately 47% of pre- and 37% of postmenarcheal girls anticipated that Ann would keep her period secret from everyone at school. Just over one-third of premenarcheal girls predicted that Ann would tell her best friend about her period; whereas, approximately one-quarter of postmenarcheal girls reported that response. Over twice as many postmenarcheal girls (28%) as premenarcheal girls (12%) suggested Ann would tell a few friends about her period. Furthermore, 8% of post- and only 3% of premenarcheal girls suggested that Ann would tell all her friends.

Not surprisingly, just over 75% of the sample indicated Ann would tell her mother first about her period, and 11% reported that Ann would tell her best friend first . A small but equal number of respondents, approximately 4%, believed that Ann would first tell her sister or her boyfriend about her period. Thus, differences between the chosen responses of pre- and postmenarcheal girls for this question were very minimal. The responses of *'father,' 'school nurse'* or *'school teacher'* were not chosen by any of the girls in the sample. One girl wrote in the *'other'* category that the first person Ann would tell about her period was her cousin.

Approximately 7% of the sample reported that Ann would never talk to her mother about her period, and 19% of post- and 12% of premenarcheal girls indicated that Ann would find discussing menstruation with her mother very difficult. Almost one half of pre- compared to just over one third of postmenarcheal girls thought Ann would find it a little difficult; however, 35% of the sample thought Ann could easily talk to her mother about her period.

Two questions addressed the issue of discussing menstruation with a male, either Ann's father or a male teacher. Minimal differences existed between the groups' responses for both questions. The majority of girls in the sample, approximately 70%, chose the response *'Ann would never talk'* to her father or a male teacher, and 19% suggested that Ann would find it *'very difficult.'* Only 6% of the sample thought Ann would find it *'just a little difficult'* to discuss menstruation with her father or a male teacher. The only difference between the responses to the questions was that almost 4% of the sample (two pre- and three postmenarcheal girls) thought Ann could easily talk to her father about her period while less than 1% (one premenarcheal girl) believed that Ann could easily tell a male teacher if she had a problem with her period.

Symptoms

The MPRT has five questions that pertain to the physical and affective feelings that

may be experienced during menstruation, and they are grouped under the general heading of symptoms (see Appendix A: Table1-C). This category had the largest number of non-responses for the premenarcheal group, with approximately 10% not answering each question.

Two questions addressed the affective components of how Ann would feel during her period. *'Sometimes moody'* was how 64% of premenarcheal girls anticipated Ann would feel as compared to 52% of postmenarcheal girls. Almost one quarter of postmenarcheal girls suggested that Ann would be moody during her period, and an almost equal number (22%) expected that Ann would not be moody. In comparison, 14% of premenarcheal girls expected Ann would be moody, with only 10% reporting she would not be moody. Moreover, 50% of postmenarcheal girls as compared to 42% of premenarcheal girls thought Ann would feel no different during her period; 32% of the sample thought she would be in a bad mood, and 16% believed she would feel jumpy.

Three questions addressed two of the physical symptoms associated with menstruation: feeling sick and having cramps. Approximately 25% of the sample thought Ann would not be sick during her period; whereas, the majority, almost 60%, believed that Ann would feel a little sick. Only 10% of premenarcheal as compared to 16% of postmenarcheal girls anticipated that Ann would be very sick. Approximately one half of the sample, 51%, thought that Ann would sometimes have cramps during her period, although 15% indicated she would not have cramps, and 10% more postmenarcheal (34%) than premenarcheal girls (24%) reported that Ann would have cramps during her period.

In the event that Ann did have cramps during her period, one question pertained to their severity. Approximately one half of the sample assessed that Ann's cramps would be slightly painful, and almost one third believed they would be moderately painful. A

difference between the responses of pre- and postmenarcheal girls was that twice as many postmenarcheal girls (18%) as compared to premenarcheal girls (9.5%) reported that Ann's cramps would be very painful.

Coping

In this study, coping refers to specific behavioral activities, such as those in school or in daily life activities, that are carried out to adjust to menstruation (p. 3). Ten questions elicited information about this concept in the MPRT (see Appendix A: Table1-D).

The use of tampons was addressed, and more than one response could be chosen for this question. The majority of premenarcheal girls (62%) believed that Ann would be afraid to try tampons. This response was almost 20% higher than that of the postmenarcheal girls. Approximately 45% of the sample indicated that Ann did not know how to use tampons; however, 19% of postmenarcheal girls said Ann's mother wouldn't let her try them as compared to only 9% of premenarcheal girls. If Ann did try to use tampons, almost 25% of postmenarcheal girls concluded that Ann would find them better to use than pads, but 12% expected Ann would find them too hard to use. Only 14% of premenarcheal girls anticipated that Ann would find tampons better to use than pads, and half that many, 7%, believed Ann would find them too hard to use.

In order to cope with menstruation in school, over 90% of postmenarcheal girls and 73% of premenarcheal girls indicated that Ann would bring pads from home. While 20% of premenarcheal girls said Ann would make sure she had some money to buy pads from a dispenser at school, only 3% of postmenarcheal girls reported this response. A small percentage of respondents, 5%, believed that Ann would ask the school nurse or school teacher for a pad.

To help Ann cope with the pain of cramps during her period, approximately one-third of the sample suggested Ann would take Aspirin® or Tylenol® and only 6%

believed she had to take something stronger, such as 222's or 292's. Almost 60% of post- and 46% of premenarcheal girls concluded that Ann would not have to take anything for her cramps. Regarding Ann's activity while she had menstrual cramps, less than 4% of the sample indicated that Ann would have stay home in bed, and approximately 13% anticipated that Ann would have to stay home but did not need to stay in bed. Almost 40% of premenarcheal girls expected that Ann could go to school (but not go to gym class), and 35% believed that she could go to both school and gym class. In contrast, 27% of the postmenarcheal girls believed Ann could go to school but not to gym class, and over one half, 55%, anticipated that Ann could go to school as well as go to gym class.

Five questions in the coping category (#29, #31 to #34) pertain to attendance at daily life activities while menstruating, and they had dichotomous, yes or no, responses. The daily life activities included attendance at school gym class, gymnastics, Pathfinders (a youth group for girls), a school dance and, finally, swimming. The responses for all five questions were added together to obtain a total score ranging from five to a maximum of ten and are presented in Table 3. The results were computed from the answers provided by the 135 respondents who replied to all five questions.

Approximately 2% of those who responded received a score of five, indicating Ann would not attend daily life activities while menstruating, and just over 20% scored ten, suggesting that Ann had full attendance at daily life activities. The majority of the respondents, 76%, thought Ann would partially attend daily life activities while menstruating, with a total score of six to nine. Swimming was the activity that 70% of the girls in the total sample anticipated Ann would not attend during menstruation, and as well, 28% believed she would not go to gym class, and 38% indicated that Ann would not go to gymnastics. Similar responses were received from pre- and postmenarcheal girls except that 8% more pre- than postmenarcheal girls reported that Ann would not

attend gym class. In examining the means of the total score in the coping category for the pre- and postmenarcheal groups, there was not a significant difference ($p \leq .05$).

Table 3

Perceived Attendance at Daily Life Activities During Menstruation

	Not Attended score(1-5)		Partially Attended score(6-9)		Fully Attended score(10)	
	n	(%)	n	(%)	n	(%)
Premenarcheal	2	2.9	50	72.5	17	24.6
Postmenarcheal	1	1.5	53	80.3	12	18.2
Total	3	2.2	103	76.3	29	21.5

Note: number of missing responses=6

The final question in the coping category related to Ann's bathing routine while menstruating. One premenarcheal and two postmenarcheal girls reported that Ann would not shower or have a bath while she was menstruating. Three quarters of premenarcheal as compared to almost two thirds of postmenarcheal girls thought Ann would shower or have a bath more often when menstruating, while 12% more postmenarcheal girls (34%) than premenarcheal (22%) girls indicated that Ann would not shower or bathe any more often.

School Facilities

The four questions in the school category pertained to the environmental conditions and facilities provided at school to manage menstruation (p.3). Two questions relate to the pad dispenser, one to the the pad disposal and one to the availability of pads at school for the girls when they are menstruating (see Appendix A: Table1-E).

At Ann's school, the pad dispenser would be outside the bathroom cubicle, as

indicated by the responses of 51% of the post- and 62% of the premenarcheal girls. However, 22% of post- and 10% of the premenarcheal girls said there would be no pad dispenser in the bathroom, and an almost equal number from both groups, approximately 26%, indicated it would be inside each bathroom cubicle. One question hypothesized that there was a pad dispenser at Ann's school, and approximately 47% of the sample reported it would be always empty or broken, and 34% believed it sometimes would be empty. Only 12% of premenarcheal girls and 7% of postmenarcheal girls thought the pad dispenser at Ann's school would always have a pad in it. Approximately 13% of the sample indicated that the girls at Ann's school would have to ask the school nurse or teacher for a pad because none were provided at the school, and for this same reason, 34% of post- and 26% of premenarcheal girls believed Ann would have to bring some pads from home. However, almost 60% of pre- and 48% of postmenarcheal girls suggested the girls at Ann's school would be able to buy pads from the dispenser in the washroom.

The pad disposal unit at Ann's school was thought to be inside the bathroom cubicle by 40% of postmenarcheal girls; 25% believed it would outside the cubicle, and 34% reported the garbage can would be the only place to dispose of pads. In contrast, 32% of premenarcheal girls indicated that the pad disposal unit at Ann's school would be inside the bathroom cubicle; 38% indicated it would be outside the cubicle, and 27% suggested there would be no pad disposal, just the garbage can.

The responses of the above four questions (#11, #13 to #15) regarding school facilities were added together to get a total score for each respondent. This score indicated their perception of the overall adequacy of the facilities at Ann's school that she would have to contend with while she was menstruating, with a range of four to twelve, n=125 (see Table 4).

Table 4

Perceived Adequacy of the School Facilities

	Inadequate score (4-6)		Moderately Adequate score (7-9)		Very Adequate score (10-12)		Total	
	n	(%)	n	(%)	n	(%)	n	(%)
Premenarcheal	18	26.5	32	47.1	18	26.5	68	54.4
Postmenarcheal	18	31.6	28	49.1	11	19.3	57	45.6
Total	36	29.1	60	48.1	29	22.9	125	

Note: number of missing observations=16

As shown in Table 4, 48% of the sample indicated Ann would feel that the school facilities were *'moderately adequate,'* and only 23% indicated that Ann would believe they were *'very adequate.'* Eight percent more premenarcheal (27%) than postmenarcheal (19%) girls indicated that Ann would feel the school facilities were *'very adequate'* for the girls when they were menstruating. Analysis of the means of the total score for the pre- and postmenarcheal girls indicated there was no significance difference ($p \leq .05$).

Preparation

The preparation category of the MPRT contains 16 questions that pertain to information and conditions related to preparing a girl for menstruation (see Appendix A: Table1-F).

Five questions addressed Ann's perceived knowledge and readiness for menstruation which would reflect the adequacy of the preparation she received (if any) for menstruation. The majority of girls in the sample, approximately 92%, felt Ann

would know what her period was when she first saw it; however, in spite of this, only 21% of post- and 7% of premenarcheal girls concluded that Ann would be well prepared for her period. Just over one third of post- and one quarter of premenarcheal girls indicated that Ann would be unprepared for her period, and 66% of pre- and 43% of postmenarcheal girls reported Ann would be somewhat prepared for her period. Although 76% of postmenarcheal girls felt Ann would know what to do when she first saw her period, approximately 38% of premenarcheal girls predicted that Ann would not know what to do. Only 40% of premenarcheal girls expected that Ann would be prepared by having supplies and know how to use them as compared to 57% of postmenarcheal girls; however, 22% of premenarcheal girls believed that Ann would have supplies without knowing how to use them, but only 8% of postmenarcheal girls reported that response. Approximately one-third of the sample believed that Ann would not have any supplies ready; with an equal number of pre- and postmenarcheal girls choosing that response.

One aspect of being prepared for menstruation is knowing when to expect a period each month. Two-thirds of premenarcheal girls as compared to approximately three-quarters of postmenarcheal girls expected that Ann would know about the timing and regularity of periods, while one third of pre- and one quarter of postmenarcheal girls anticipated that Ann would not know when to expect her next period.

Approximately 44% of the sample thought that Ann would have first learned about her period at school; 36% believed that it would have been from her mother, and 6% suggested she would have learned first about her period from her friends. Ann's older sister would have been the first to tell her according to 3% of the sample, with an equal number reporting that Ann read about it on her own. Three responses received in the *'other'* category indicated that it would have been Ann's cousin, her aunt or her boyfriend from whom Ann first learned about menstruation.

In contrast, 36% of the sample thought Ann would have learned the most about menstruation from her mother although 31% of pre- and 21% of postmenarcheal suggested it was from the health class at school. Books and pamphlets provided Ann with the most information as reported by 13% of the sample, and 7% believed Ann would have learned the most from the community health nurse at their school. Less than 5% of the sample believed that Ann would have learned the most about menstruation from her friends or her sister. Only 2% of the sample believed Ann would not have learned about menstruation from anyone. Ann's cousin, aunt and uncle were three other people cited in the *'other'* category that would have provided Ann with the most information about menstruation as indicated by eight respondents.

One question, which contained 9 statements plus an *'other'* category, assessed what information Ann's mother gave her about menstruation. More than one response could be chosen for this question (see Table 5).

Responses #1, 2, 4, 7 and 9 (see Table 5) were chosen 7% to 17% more frequently by postmenarcheal than premenarcheal girls, and these statements were related to activities and knowledge that were necessary to be prepared for and cope with menstruation. Statements #3, 5, 6 and 8 were responded to just about equally by both groups, with response #8 chosen by 4% more pre- than postmenarcheal girls. The *'other'* category received 9 responses, such as what to do if you have cramps, why and when you get menstruation and that it could happen soon. Five of these *'other'* responses indicated that Ann's mother would not have told her anything about menstruation.

Table 5

Results of Question #38 in the Preparation Category

	Pre-		Post-		Total	
	n	%	n	%	n	%
38. What things did Ann's mother tell her about periods? (you may pick more than one answer)						
1. how to put on a pad.	30	40.5	34	50.8	64	45.4
2. how to use tampons.	11	14.9	18	26.9	29	20.6
3. how a period may feel.	35	47.3	33	49.3	68	48.2
4. timing of her periods.	31	41.9	36	53.7	67	47.5
5. what she can and cannot do while she is on her period.	20	27.0	17	25.4	37	26.2
6. what emotions she may feel when she is on her period.	30	40.5	27	40.3	57	40.4
7. appropriate hygiene when she on her period.	16	21.6	26	38.8	42	29.8
8. how to be prepared for her period.	41	55.4	34	50.8	75	53.2
9. how it related to growing-up.	30	40.5	33	49.3	63	44.7
10. other _____.	8	9.5	3	3.0	11	6.3

Four questions assessed the perceptions of the girls in the sample about the adequacy of the information Ann received from three sources: books and pamphlets, a film on menstruation and growing up and the class at school about menstruation. Only 34% of premenarcheal girls thought Ann would believe that the information in the books and pamphlets were about right and easy to understand, with over 30% more postmenarcheal girls (67%) choosing that response. Approximately 32% of the premenarcheal girls as compared to less than 10% of postmenarcheal girls expected that Ann would feel the information in the reading material was a little difficult to understand. Only 8% of pre- and 3% of postmenarcheal girls suggested that Ann would believe it was too difficult. Just over 20% of the sample reported that Ann would not have read any books or pamphlets.

Approximately 55% of the sample reported that Ann would have felt the film she saw at school about menstruation was clear and easy to understand; however, 28% of post- as compared to 10% of premenarcheal girls suggested Ann would feel it was too simple and boring. Only 5% of the sample believed that Ann would perceive the film to be too hard to understand, and 27% of pre- and 15% of postmenarcheal girls suggested that Ann did not see a film. Furthermore, 27% of the sample believed Ann thought the film was very helpful; 45% said she would think it was a little helpful, and over four times as many postmenarcheal (13%) as premenarcheal (3%) expected that Ann would choose the response *'not helpful.'*

Approximately 11% of the sample said Ann probably would not have had a class on menstruation in school, but if Ann did have a class, 36% believed she would think it would have not gone over everything about menstruation. One-quarter of post- and only one-tenth of premenarcheal girls decided the class Ann received would not have taught her anything new, but 34% of the sample believed it would have gone over everything Ann would have wanted to know about periods.

The responses from the four questions (#40 to #43) assessing the adequacy of the information Ann received from the three sources (books and pamphlets, film and the class on menstruation) were added together to get an overall score on how adequate the sample perceived Ann's information. The results were calculated from the responses of the 134 subjects who replied to all four questions, and Table 6 shows the results of this calculation.

Table 6

Perceived Adequacy of Information Received for Menstruation

	No Info. score (1-4)		Inadequate Info. score (5-8)		Mod. Adequate Info. score (9-12)		Very Adequate Info. score (13-16)	
	n	(%)	n	(%)	n	(%)	n	(%)
Premenarcheal	2	2.9	9	13.2	31	45.6	26	38.2
Postmenarcheal	2	3.0	5	7.6	24	36.4	35	53.0
Total	4	3.0	14	10.4	55	41.0	61	45.5

Note: number of missing responses=8

Fifty-three percent of post- as compared to 38% of premenarcheal girls thought Ann would feel the information she received for preparation of menstruation was very adequate, with the majority of premenarcheal girls (46%) suggesting Ann would perceive it to be moderately adequate. Only 8% of post- and 13% of premenarcheal girls believed Ann thought the information received would be inadequate, with 3% of the sample suggesting that Ann did not receive any information. Analysis of the means of the total score for the pre- and postmenarcheal girls indicated there was no significant difference ($p \leq .05$).

According to the girls in the sample, 67% reported that Ann would want to know

more about how to avoid the problem of bleeding through her clothes, and 28% suggested Ann would be concerned about how to keep her period secret from others. Just over 60% of premenarcheal girls believed that Ann would want to know more about things that could go wrong while menstruating, and 46% of postmenarcheal girls chose that response. Believing that Ann would want knowledge about the timing of periods and how to act when menstruating were the responses chosen respectively by 50% and 41% of premenarcheal girls as compared to 31% and 22% of postmenarcheal girls. *'Other'* responses given by 10 subjects of what Ann would want to know more about included how to put on pads and tampons, how to get rid of cramps, how to take a shower when menstruating and how it related to the relationship with boys.

The majority of girls in the sample (53% pre- and 63% postmenarcheal) reported that Ann would want the books and pamphlets to contain more information about how to cope with your period; 20% more premenarcheal (46%) than postmenarcheal girls (26%) suggested that Ann would believe the reading material should contain more information on how a period actually felt. Again, more premenarcheal (37%) as compared to postmenarcheal girls (27%) thought Ann would want the reading material to explain more about what was happening to her body while menstruating, and only 4% of pre- as compared to 22% of postmenarcheal girls indicated that Ann would feel the books and pamphlets contained enough information already. The *'other'* category received responses from four premenarcheal girls which included wanting the books and pamphlets to contain more information about tampons and hemorrhoids, with two girls suggesting that Ann would not have not read any books about menstruation.

In relation to the class on menstruation at school, almost one-half of the sample (46%) reported that Ann would want the information on menstruation to be given in grade five; 34% suggested she would want it in grade six, and 7% decided Ann would want the teaching to start in grade seven. A small number of the sample, 12%, reported

that Ann would want the teaching of menstruation to begin in grade four. The majority of premenarcheal girls (53%) indicated that Ann would want just girls to be present during the class on menstruation; whereas, the majority of postmenarcheal girls (46%) reported that Ann would want the class to be taught to boys and girls separately. Twenty-two percent of postmenarcheal girls suggested Ann would want both boys and girls to be in the class on menstruation, but only 12% of premenarcheal believed Ann would feel that way.

Additional Analysis of the MPRT

In addition to the analyses done on the individual categories of the MPRT, the scores obtained for the preparation category were correlated with the scores of the coping and feelings category to see if a relationship existed between these variables. A nonparametric correlation statistic, Spearman rho, was used for both correlations; the results were not significant ($p \leq .05$).

Analysis was also carried out to see if the girls who had been menstruating the longest responded differently than the girls who had been menstruating a shorter length of time to the questions in the four categories in which scores were computed (preparation, coping, feelings and school facilities). A new variable *'total score'* was created by adding together all the scores obtained for the four categories, with a possible total score ranging from 15 to 47. The midpoint of the sample was chosen to be one year, with 35 girls having menstruated from one month to one year and 32 girls having menstruated from thirteen months to four years. Nearly identical average scores were obtained for each group, with 34.0 the average score for the group menstruating the shortest time and 33.9 the average score of the group menstruating the longest time. There were six girls in each group who had incomplete scores, which meant the scores of one to three categories were missing from the *'total score.'*

Content Analysis of Three Short Answer Questions in the MPRT

Question 48

The first question pertained to preparation: "What suggestions could you give that would be helpful in preparing yourself or other girls for menstruation?" The response rate to this question was 79%, with 159 suggestions received. Through content analysis of the responses, four main themes were identified: being prepared, knowledge, communication and feelings (Appendix F). A category that contained *'other'* responses was also developed.

Being Prepared. The *'being prepared'* category was the largest, with 68 suggestions received that would help girls be prepared for menstruation. Thirty-two girls made some reference to "have supplies ready," with another seventeen girls simply saying "be prepared" or "just be ready." Knowing the timing of your period was considered important by seven girls. Other recommendations included ideas to help conceal accidents, such as "That they should wear black pants so if they leak thru (sic) other people won't see it" and to seek help if necessary, e.g., "If they bleed through their clothes they could go to the school nurse and get some help." There was one negative response placed in this category. It was received from a premenarcheal girl reflecting her lack of knowledge or preparation: "You can't really be prepared because you never know."

Knowledge . Ten of the nineteen responses placed in the knowledge domain stressed the need to acquire as much information as possible about menstruation: "You should read lots of books," and "Find out as much as possible about different things." As well, some suggestions pertained to knowing about specific aspects of menstruation and included references to menstrual education: "Know how to use pads and tampons," and "Have better lessons at school." One premenarcheal girl made the unique suggestion of "make a demonstration on a dummy" to help the girls learn about how to use pads and

tampons.

Communication. Twenty-nine responses were placed into this category, with twenty-two girls stressing the importance of talking to someone to find out how to be prepared for menstruation and suggesting that their mother, the school nurse or their close friend could help them the most. Words of caution were also given in terms of who to teli and who not to tell: "Don't tell everyone because they might not care," and "Talk about it with someone you know has had it and someone you trust."

Feelings. The feelings category contains twenty-six suggestions on how to cope emotionally with menstruation. The majority of the responses provided were written in a positive way encouraging other girls not to feel scared, nervous, embarrassed, not to make a big deal about it and to feel proud. Only two girls stressed the maturational aspect of menstruation: "Don't worry about it. It's part of growing-up, it makes you feel older, happier, prouder," and "Be proud you are growing-up." Two girls gave positive responses embedded in a negative way: "I would say to other girls not to worry about it, it's not as if you were going to die," and "Don't be mad at yourself when it happens."

Other . Sixteen responses were placed in this category as they did not fit under any of the other major themes. Suggestions included encouragement to stay active, the importance of keeping yourself clean during menstruation, to eat good food and to act normally when menstruating. One premenarcheal girl in grade eight wanted more information about pregnancy and birth control.

Question 49

The second short answer question elicited the perceptions of the girls in the sample about the adequacy of their school facilities when they were menstruating: "Do you think the school facilities such as bathrooms, changing room or the lockers could be changed to help girls feel more comfortable when they are menstruating? If so how?" The

response rate to this question was 92%, with 152 suggestions received.

Through content analysis of the responses, two main categories were obtained: improvements to the bathroom and changing room plus a general category containing *'other'* statements (see Appendix F). Ten girls in the sample believed that changes were necessary but did not provide any specific suggestions. As well, 21 girls (10 postmenarcheal and 11 premenarcheal) indicated that no changes were necessary to the school facilities. The overwhelming theme of the suggestions obtained was that of privacy: changes were necessary to the bathroom and changing room that would increase the privacy of the girls when they were menstruating.

Bathroom Improvements. A total of 95 suggestions were placed in this category, with 62 relating to the sanitary pad dispenser. Of these 62 comments, 36 pertained to wanting the pad dispenser placed in the cubicle, with 27 of these suggestions provided by the grade eight girls. Other suggestions related to having the dispenser working and full of pads, not having the dispenser close so loudly and that tampons should be sold as well as pads. Another area that was stressed by 20 of the girls was the lack of a sanitary disposal in the cubicles, with 10 of these suggestions given by the grade six girls, for example, "[A] place where you can put them in after," and "They should put a disposal in each cubicle." Other comments included keeping the bathrooms cleaner and covering the cracks around the doors to the stalls.

Changing Room Improvements. Eighteen comments comprised this category, with two major areas receiving the most comments. Having more closed cubicles in which to change and having a pad dispenser in the changing room as well as the bathroom were cited as the areas of concern. Only two suggestions were obtained from the grade seven girls in this area, with an almost equal number provided by the grade six and grade eight girls (six and nine questions respectively).

Other. Eight comments were considered as *'other.'* Responses included wanting bigger and individualized lockers, having longer breaks between classes, being able to leave the bathroom whenever you want to and not being required to attend gym when you are menstruating.

Question 50

The final short answer question of the MPRT was related to communication and contained two sections which will be discussed separately.

Part A. The first question, "What words do you use when talking about your period?" was answered by 31% of the sample, yielding a total of 45 responses that obtained words other than *'menstruation'* or *'period'* (see Appendix F). Identified from the responses were seven themes that were used when the girls discussed menstruation so no one else would know what they were talking about, and their privacy could be maintained. Reference was made to the timing and regularity of periods by ten girls such as, "that time of the month" or "monthly bill," with everyday names like "Freddy" of "Tilley" used by eight of the respondents. "Growing-up" described the maturational aspect of menstruation with "dot" made in reference to the symptom of bleeding. Abbreviations were also given, such as "P.D.," and the implied meaning accompanied by a knowing look such as "it" and "the thing" were used by nine subjects. The use of "rags" and "the curse" by ten girls described the negative connotations associated with menstruation.

Part B. The second question, "What words do other people use that you know about ?," received responses by 28% of the sample, yielding a total of 45 code words, and from these, six categories were identified. The two largest sections contained words related to the symptoms of menstruation such as "slosh" and "floating down a red river and negative references like "rags" and "Dooms Day." "Your thing" and "it" were known to be used by nine of the girls with, only six responses received for the

timing, abbreviation and names category. Again, as in Part A, the focus of the code words was to maintain privacy when discussing menstruation.

Questions Discussed in the Question and Answer Period

After the questionnaires were completed and handed in, a short discussion period was conducted for each class. Ninety-two girls submitted questions, and because several girls asked more than one question, a total of 126 questions were received. It was possible to group the questions into the particular grades and school; however, it was impossible to know the menstrual status of the girls who supplied the questions. The questions were addressed briefly due to time limitations. All of the questions were answered in the grade six and grade seven classes, but because 60 grade eight girls completed the questionnaires in one sitting, the 55 questions submitted could not all be answered in the remaining time. The principal of the school was made aware of the nature of the questions that were not answered, and it was suggested that another session for the girls regarding menstruation and sexuality be given by an appropriate person, such as the school nurse.

The researcher was assisted in answering questions in one grade six and one grade seven class by the female teacher assigned to supervise the class while the questionnaires were being completed. This was helpful because the teacher was able to respond appropriately to questions about pregnancy as the researcher was unfamiliar with the policies of the school board concerning sexuality teaching.

The 126 questions were content analysed, with six discrete categories identified: timing, supplies, symptoms, communication, sexuality, coping and a general knowledge category containing *'other'* questions (see Appendix G). A main theme was not apparent from the questions of either the grade six or grade seven classes; however, nine of the ten questions in the sexuality category were written by the grade eight girls. In addition, it is interesting to note that nine questions were directed to the researcher's own

menstrual experience.

Description of Main Themes

Timing. The timing category was the major area questioned, containing thirty-four questions. Wanting to know the usual age at menarche, the normal conditions in terms of frequency and length of menstruation and when to expect the next period were the focus of the majority of the questions. The grade six and grade seven students asked all nine questions concerning the normal age at menarche, such as, "What is the average age you usually start your period?" All nine concerns about the normality of "always a little late" and to sometimes skip your period" were voiced by the grade eight girls. Questions about the start and finish of a period were asked by girls in all three classes, for example, "How do you know when your period is coming?," and "How do you know when your period is done?"

Supplies. Twenty-five questions about the supplies used to manage the menstrual flow were received. Fifteen questions related to the use of tampons: "Do you have to be a certain age for tampons, do you have to be developed in certain more ways?", "Why are tampons only used for swimming?", and "If you use tampon is it true that your (sic) not a virgin after that?" Six of these 15 questions were directed to possible health risks associated with using tampons such as Toxic Shock Syndrome. The use of pads was reflected in the questions but the majority of these related to tampons as well: "What is the regular amount you change your pad or tampon?"

Symptoms. Fifteen of the 21 questions in the symptoms category related to the physical experiences associated with menstruation: "Will the cramps be very bad?", and "What does your period really feel like?" Only two questions referred to the emotional aspects: "Did your period make you moody?", and "Is it true that people get moody or sick during menstruation?" Two questions related to the amount of blood lost during menstruation.

Coping. How to cope with some of the difficulties and problems associated with menstruation was the focus of the sixteen questions in the coping category. Ten of the questions dealt with the common problems associated with managing the menstrual flow, especially in the school situation, for example, "What should you do if your period comes on your clothes at school?", and "What if there are no tampons in the pad dispenser?" Some girls mentioned the emotional aspects of coping with menstruation: "What if you're too embarrassed to ask the nurse or secretary for a pad?" Other questions related to how to take a bath, shower or go swimming while menstruating, how to act during menstruation and how to make a period more comfortable.

Sexuality. Nine questions pertaining to birth control and sexual relations were received from the grade eight girls plus one from the grade six class. "Is birth control a good way out of pregnancy?" and "If you make love when can you get pregnant?" are examples of the types of questions asked.

Communication. Nine questions comprise the communication category, and they relate not only to verbal communication, that is, who to tell, but also to the nonverbal aspects of menstruation: "Can guys notice you have your period?", and "Can other people tell you are wearing a pad?" One girl in grade six indicated that she was a bit afraid to talk to her mom or dad and wondered what she should do; another girl was curious about what other names people used instead of *'period'* or *'menstruation.'*

General Knowledge. Seventeen questions were placed in this category because they did not fit within the other major headings. Curiosity about boys was apparent: "Do boys have anything like periods?" Other questions dealt with such issues as hemorrhoids, nutrition while menstruating and fundamental questions like "What is it?", and "Why do we have our periods?" Four questions related to participating in activities during menstruation, for example, "Is there certain activities you can't do?", and "Is swimming with your period bad because of the chlorine?"

Menstrual Attitude Questionnaire (MAQ)

The Menstrual Attitude Questionnaire (MAQ) is composed of five attitude factors (see Appendix C): menstruation as a psychologically and physically debilitating event, as a natural, bothersome and predicted event and as an event that does not and should not affect one's behavior (Brooks-Gunn & Ruble, 1980). The subjects responded to the 43 questions using a five point Likert scale format (strongly disagree=1, unsure=3, strongly agree=5), which took them about 15-20 minutes to complete. The reliability for the total scale was .71, and for each subscale it was as follows: bothersome=.49, natural=.71, predictable=.22, denial=.22 and debilitating=.64.

In the beginning stage of analysis, the positively worded items in each category were reversed so the items were all scored in the same direction. The mean for each category was obtained by summing the items and dividing the total score received for each subject by the number of items in each category. Table 7 presents the means and standard deviation for each category for the total sample, as well as, for the pre- and postmenarcheal groups, with the significance of the differences between the means of these two groups included.

In general, the mean for three of the categories (predictable, denial and debilitating) was centered around the score of three, and as well, 19 of the questions had *'unsure'* chosen as the most common response, which indicates that the girls in the sample were unsure about the statements contained in the MAQ and could not make any decision to either agree or disagree with them. The mean for the natural category was 2.68, which suggested the girls thought that menstruation was not very natural. The only significant difference found between the mean scores of the pre- and postmenarcheal groups was in the natural category ($p \leq .05$), and it appears that the postmenarcheal thought that menstruation was more natural than the premenarcheal girls. The mean score for the bothersome category was 3.35, suggesting that the girls perceived menstruation as

somewhat bothersome. In examining the differences between the mean scores for the pre- and postmenarcheal girls, it appears that the postmenarcheal girls perceived menstruation to be more bothersome than the premenarcheal girls, although this result was not significant ($p \leq .05$).

Table 7
Summary Statistics for the Menstrual Attitude Questionnaire

	Total Sample			Menarcheal Status		
Attitude Factors	n	Mean	S.D.	Pre-	Post-	Sig. bet. means
Bothersome	132	3.35	0.57	3.26	3.44	.0725
Natural	137	2.68	0.56	2.57	2.79	*.0218
Predictable	138	2.87	0.51	2.83	2.92	.3206
Denial	134	3.16	0.48	2.94	2.95	.1267
Debilitating	134	2.95	0.48	2.94	2.95	.9876

* $p \leq .05$

As was done for the MPRT, analyses were carried out on the scores of the MAQ to see if differences existed between the responses of the girls who had been menstruating the shortest length of time and the girls who had been menstruating the longest length of time. A new variable *'total score'* was created by adding together the scores obtained on each subscale with the total score, ranging from 43 to 215. The midpoint was one year, with 35 girls having menstruated from one month to one year and 32 girls having menstruated from thirteen months to four years. Little difference was found between the groups, with 122 the average score obtained for the group menstruating the shortest length of time and 128 the average score obtained for the group menstruating the longest

length of time. Three girls in the group that were menstruating the shortest time had incomplete scores as did four girls in the other group, which meant the scores of one to three categories were missing from the *'total score.'*

The score obtained in the coping category of the MPRT was correlated with each score obtained for the five subscales in the MAQ using the Spearman rho statistic. The categories of debilitating and denial had significant negative correlations ($p \leq .05$) with the coping category; however, the reliability obtained for these categories were low; therefore, the validity of this result is questionable.

V. Discussion

This research study was designed to elicit the perceptions of adolescent girls toward menstruation. This chapter will present the positive aspects as well as the limitations of the study. Significant findings will be discussed followed by the implications for nursing practice and education (especially as it relates to adolescent health care) and suggestions for further research.

Discussion of Methods

Entry into the Field

In the past, researching and obtaining information about the experience of menstruation from adolescents proved to be a challenge. Problems, such as struggling with the school boards to gain entry into the school system and then receiving low consent response rates from from parents, have caused frustration for investigators. Consequently, this study was undertaken considering the problems of accessing an adolescent population and obtaining an adequate sample size. Therefore, several measures were taken at the point of entry into the field to assure the success of the study.

First, personal contact was made by the investigator with the superintendent of the school board, the three principals and the class teachers involved. The personal approach throughout the beginning stages of entry into the schools is believed to have been an important factor in obtaining cooperation and assistance at each school. One principal commented, "Your personal contact was very effective and appreciated."

Second, each class of girls was also personally addressed when the consent forms were distributed. A letter of support for the study from the principal of each school accompanied each consent form, and this was felt to have been a key factor in obtaining a high response rate of 88% from the parents, yielding a sample size of 141 subjects. The sample size was adequate and provided sufficient information for data analysis.

Questionnaires

The use of paper and pencil questionnaires to obtain information from adolescents about menstruation was effective. The responses from each subject (excluding the short answer questions) were easily coded by hand, entered into the computer by optical scoring sheets and then computer analysed to examine possible relationships between variables. There was no giggling or embarrassment apparent from the participants as they completed the questionnaires, and in fact, during the question and answer period, they were quite attentive; some even asked questions verbally. In the grade six and seven classes, having the girls sit in alternate seats in the class rooms was an effective method for separating them in order to maintain their privacy. In the grade eight class, the subjects completed the questionnaires in the lunch room. Although, they were seated in every second chair, there were many conversations being carried out in the room despite being told by the researcher that questions were to be answered individually with no consultation between peers. It appeared that the grade eight girls had less inhibition with the topic, and this may indicate that it would be possible to conduct face-to-face interviews with adolescents of this age group; however, for the younger girls, paper and pencil questionnaires are believed to be more suitable.

One grade six girl suggested, "They should have us do the *'Ann'* questionnaire before they teach about such things to us," and another said, "It was fun to do." These comments indicated that the exercise of completing the questionnaires was beneficial for the participants and they enjoyed doing them. The question and answer period following the completion of the questionnaires was a valuable learning experience for the girls as some commented that the information given was very helpful.

Menstrual Perceptions Research Tool (MPRT)

Using the projective technique of sentence completion, with *'Ann'* as the third person in the sentence stems, was effective in eliciting responses from adolescent girls

about menstruation. Because projective identification is an established psychological technique, the responses received from the questionnaire are believed to reflect the thoughts and feelings of the subjects themselves. The girls did identify with Ann as evidenced by some of the responses received in the *'other'* category (opened-ended questions) and the comments written by the side of some questions, for example, one girl wrote, "She (Ann) doesn't go to Pathfinders anyway" and "I always keep myself clean, even if I don't have my period."

Detailed and specific information was received from the short answer questions. Many responses, however, seemed to have been inspired by the questions in the *'Ann'* questionnaire, for example, suggestions received about the improvements to the school bathrooms seemed to have been prompted by the questions in the MPRT that assessed the adequacy of the school facilities. To avoid receiving responses that may be influenced by previous questions, any short answer questions should be asked at the beginning of the questionnaire.

As indicated in the methods section, 60% of the 20 subjects who completed the MPRT twice, had over 70% agreement between the two completions which was adequate. A higher percentage of agreement may have been achieved if it were not for the forces of history and maturation that were present during the interim between the two questionnaire completions (Campbell & Stanley, 1966). In this study, there are three possible effects of history that could account for differences in responses: the question and answer period after the first completion of the MPRT may have caused subjects to answer differently the second time; the fact that the questionnaire may have stimulated interest in menstruation resulting in informal discussions between friends, and thus perhaps *'peer'* responses were received on the second completion; and finally, that the subjects may have approached their mother or other significant individual for information on menstruation, again, causing them to answer differently on the second completion.

Maturation, which includes all those biological or psychological processes that vary with the passage of time (Campbell & Stanley, 1966), may also be a contributing factor to differences obtained between the two completions, for example, the subjects may have become bored or tired of filling out the questionnaire a second time and, therefore, did not think about the questions as carefully as the first time.

Upon completion of the data collection and data analysis, minor revisions were made to the MPRT based on the questions asked during data collection and from the responses that were provided in the open-ended questions (see Appendix B). If the MPRT were to be used again in a study, the modified version should be utilized.

Menstrual Attitude Questionnaire (MAQ)

The modified Menstrual Attitude Questionnaire that was utilized in this study did not appear to elicit attitudes from the adolescent girls regarding menstruation. The reliability of three of the five subscales was below .50, and as well, for 19 of the questions in the questionnaire, the most response chosen was *'unsure.'* Therefore, the information obtained in the MAQ was not reliable and not useful when analysing the results for attitudes of the girls in the sample toward menstruation.

Two explanations are possible for why the subjects may have chosen the response *'unsure.'* One, because they were unsure about how to respond to the statements, and two, because they were unsure about how they felt about the information in the item. Being *'unsure'* about how to respond to the statements may be due to a lack of comprehension by the girls. The presence of negatively worded statements in the reversed items made them difficult to understand, for example, "I don't believe that my menstrual period affects/will affect how well I do on tasks in which I have to think" (#1). In addition, as indicated in the previous example, each item was worded in terms of the menarcheal status of the girls, either pre- or postmenarcheal, and this may have caused confusion for the girls when reading each item. In reference to being *'unsure'*

about their feelings in terms of each statement, possible explanations include: they have not had the experience of what was described, i.e., menstrual cramps, or they did not have any idea about the concept being presented, for example, "Avoiding certain activities during menstruation is often very wise" (#10).

Little information was obtained from the modified MAQ. The recommendation would be not to use this version of the MAQ with adolescents unless some revisions were made, for example some suggestions would be to have separate questionnaires for the pre- and postmenarcheal groups and to reword the items that are presented in the negative direction for easier comprehension.

Limitations of the Study

There are four limitations of this study that restrict the generalizability of the results to this sample. The first limitation is that the subjects in this study were not randomly selected from the population. Second, the sample was obtained from a middle to upper-class population. Consequently, some biases may exist in the results, for example, a high rate of response (88%), may have been received because the consenting parents or guardians felt their daughters were well informed and did not view the study as a threat. Third, is that the sample contained only Caucasian subjects, and therefore, the feelings and thoughts of adolescents girls about menstruation from other cultural groups were not assessed. The fourth limitation is that the sample was obtained from only Catholic schools which may have caused a bias in the results.

Another limitation of the study is that the short answer questions in the MPRT were asked after the multiple choice questions. The subjects may, therefore, have received some ideas or have been prompted to give responses that were directly related to the content of the multiple choice questions.

The final limitation is related to the reliability of the MPRT. Only 20 subjects in grade six completed the questionnaire twice to determine its accuracy, consistency and

stability over time. A larger sample that included grade eight girls would have provided more information about the reliability of the tool. Also, pre-testing the MPRT with the grade eight girls would also have provided another viewpoint in terms of assessing the clarity and readability of the MPRT.

These limitations do not detract from the importance of the valuable information that was obtained in this study. First, the study has shown that it is possible to achieve an adequate response rate from an adolescent population to acquire information about menstruation. Second, any information that can be obtained about the experience of menstruation will benefit nurses in their teaching and provision of care to adolescent girls.

Discussion of Findings

Two questionnaires, the MPRT and the MAQ, were utilized in this study to examine seven variables associated with menstruation. The following discussion will address the most significant findings regarding each variable and how the results relate to other research in the area. Each category in the MPRT (preparation, coping, feelings, school facilities, symptoms, and communication) will be discussed separately, followed by the results obtained from the MAQ.

Menstrual Perceptions Research Tool (MPRT)

Preparation

The preparation category provided interesting information in terms of adolescent preparation for menstruation. The most pertinent issue evident in the data is that the preparation received for menstruation is not considered adequate, especially by premenarcheal girls. This finding would explain why feelings of being well prepared for menarche were not indicated by premenarcheal girls, and in fact, many believed they would not know what to do. Postmenarcheal girls perceived the information they received as more adequate than premenarcheal girls; however, few postmenarcheal girls

reported that they were well prepared for menarche. The discrepancy between believing one received adequate information yet not feeling well prepared for menarche is not new and has been discussed in the literature by several other researchers (Brooks- Gunn & Ruble, 1983; Rierdan, et al., 1983; Whisnant & Zegans, 1975). The question of what constitutes adequate information, leading to feelings of being well prepared for menarche, is an important one. Being prepared intellectually as well as emotionally were cited as key components for adequate preparation by Rierdan et al., (1983); however, a successful program that would contain the appropriate balance between these two does not appear to have been developed.

The role the school plays seems to be important in preparing girls for menarche (especially before menarche), but the mother provided the girls in this sample with the most information. It seems from this data that the participants perceived that their mothers discussed more on how to be prepared for and cope with a period once they had experienced menarche, and in fact, more post- than premenarcheal girls indicated that they received the most information from their mothers. This finding is similar to the one presented by Fox & Inazu (1980); the timing of the first discussion about menstruation by the mother was closely matched with the daughter's event of menarche. However, Hill, Holmbeck, Marlow, Green and Lynch (1985) found that shortly after menarche there appeared to be a period of stress in the mother-daughter relationship. This stress could prevent the adolescent girl from asking for help or being provided with the support she needs at that time by her mother. Andrews (1986) also discusses the point that at the time when adolescent girls are questioning their parents' authority menarche makes them dependent (especially on the mother) for guidance, support and understanding. The information from these two sources suggests that another support person, such as the community health nurse, as well as, postmenarcheal classes, may be necessary to help the adolescent girls adjust to menstruation.

The community health nurse was seen as a provider of information about menstruation by very few girls, and this fact poses some interesting questions. Who is the best provider of menstrual information to adolescent girls? Would the community health nurse provide more adequate information and better preparation for menarche than the school teacher or the mother resulting in well prepared adolescent girls? It has been suggested by the director of the Health Promotion Directorate, Dr. G. Mutter ("School Health", 1986), that Canadian schools have not taken advantage of the potential of the community health nurse as an influential professional resource. Certainly, it is time to end the controversy of who prepares adolescents for menstruation. It is apparent from these data that the methods currently available to prepare adolescent girls for menarche are not adequate. Research based, effective programmes must be developed with the goal of helping adolescent girls feel well prepared for the new experience of menarche.

The subjects provided valuable information in the short answer questions as well as in the *'other'* categories of the open-ended questions in terms of how to be prepared for menstruation and what they would like to know more about. The need to know how to manage potentially embarrassing problems during menstruation was perceived as important by the subjects, and this finding was also reported by Havens and Swenson (1986). Incorporating the information that the adolescent girls themselves provide into the teaching sessions about menstruation would be a starting point in designing effective menstrual education programs.

Communication

The results from this study are similar to other studies that have examined the aspect of discussing menstruation with individuals of either sex. The participants in this study indicated that they perceive menstruation as something to discuss privately, and this was supported by the findings of Brooks-Gunn and Ruble (1983) and Whisnant and Zegans (1975). As discussed by Ernester (1977) and Williams (1983), the subjects indicated

that communication about menstruation should involve only females. The subjects were opposed to discussing menstruation with a male teacher, and this could pose a problem for the girls who are trying to adjust to the experience of menstruation in the class room environment controlled by the teacher. As discussed by Dashiff (1986) and Fuller (1980), teachers in the schools (both male and female) need to be aware of the discomfort of their female students in relation to menstruation and assist in trying to prevent or eliminate potential embarrassing situations for adolescent girls. The teachers, because they are with the students everyday, could play a significant role in either helping or hindering the acceptance of menstruation into daily school life.

Discussing menstruation with an informative person who could help them cope was stressed by the subjects, yet they were concerned that not every one should know.. The importance of maintaining privacy when discussing menstruation was evidenced by the variety of code names for menstruation that the girls used or knew about. The professionals who participate in teaching menstrual education should be aware of the various labels used and acknowledge them in their discussion. This may narrow the teacher-student gap and facilitate an environment of mutual trust and promote learning by the students. However, using the appropriate words of *'menstruation'* and *'period'* is important when teaching because using only euphemisms could reinforce the idea that menstruation should be discussed in secret. The visual aspect of menstruation was also a concern of the subjects; they were worried if other people, especially boys, could tell if they were menstruating. This finding reflects the need to have privacy maintained in the bathroom (the location of the dispenser causes embarrassment for most girls), and as well, for more information to be provided in the teaching session about the inability of others to know that one is menstruating. As one postmenarcheal girl in grade eight wrote, "No one knows unless you tell them."

School Facilities

The information obtained in this study about the inadequacy of the school facilities for adolescent girls when they are menstruating is a serious issue. Not only are young girls required to carry out the tasks necessary to manage a new experience for which they have not been well prepared, they are expected to do this in an environment that causes them embarrassment and stress. Concerns were voiced about the physical layout of the washrooms and change rooms (not having dispensers and disposals in the cubicles). Also, it was stressed that having the dispensers working and stocked at all times, with pads as well as tampons, would be helpful in minimizing the embarrassment and stress. The psychological traits characteristic of the adolescent group, such as egocentrism and concern with the imaginary audience (Mitchell, 1986), can lead a girl to believe that everyone is aware that she menstruating. This feeling of being watched may be compounded if she has to purchase pads or tampons from a dispenser situated in full view of other girls in the washroom.

Doan and Morse (in press) also found that the girls in their study were dissatisfied with the school facilities, and these authors suggested it was the responsibility of the community health nurse to be an advocate for the girls to ensure that the school washrooms were modified to promote privacy. Adolescent girls are conditioned by the media and adults to believe that menstruation is something to hide and be silent about (Brooks-Gunn & Ruble, 1983); therefore, they are unable to voice their displeasure about the inadequate facilities and continue to try and cope as best they can. The community health nurse should take it upon herself to be their advocate and help rectify a poor environmental situation to make coping with menstruation a little easier for them.

Coping

Coping with menstruation involves efforts to try and manage the tasks associated with menstruation and carry on in daily life as best one can. Avoidance of physical

activities, such as gym class, gymnastics and especially swimming, was how many of the subjects would cope during menstruation. Reasons for this could be the embarrassment of changing in front of other girls (the change rooms were not equipped with many cubicles to maintain privacy or did not have sanitary dispensers), being unsure how to use tampons which are necessary for swimming, or in fact, being too sick with cramps or stomach sickness to go. Participating in physical activity is important for young growing girls and could even help relieve some of the symptoms of menstruation. Stressing the importance of integrating menstruation into their usual daily life activities needs to be included in the menstruation lectures.

Many girls asked questions about the use of tampons, and this does not seem to be a new situation as Doan and Morse (in press) and Dashiff (1986) discuss this issue as well. Incorporating information about tampons, including their proper and improper use, would be an important point to help girls cope with menstruation during daily life activities. The suggestion by one of the subjects to, "Make a demonstration on a dummy" was certainly a unique idea to help the girls visualize how pads and especially tampons have to be worn.

During the question and answer period, several questions related to coping with the problems of menstruation, especially at school: "What should you do if you get your period in class?" Havens and Swenson (1986) also found that the girls in their sample needed strategies to help them cope with the inconvenience of menstruation. This material may be covered in the lectures on menstruation, but because the classes usually occur before menarche, premenarcheal girls may not relate to the problems that could arise, may forget a lot of the information that was presented because there was so much of it or they forget the information with the passage of time. This certainly makes a case for repeated sessions on menstruation suggested by Doan and Morse (in press); the one-hour, one-shot sessions before menarche ~~are simply not~~ sufficient. Follow-up

sessions are imperative in helping girls to integrate the experience of menarche and provide them with an opportunity to pose questions to a knowledgeable and supportive person such as the community health nurse.

Feelings

The feelings expressed by the subjects indicated they did have a mixture of feelings about menstruation. The premenarcheal group anticipated being more scared yet excited at the arrival of menarche, but postmenarcheal girls were more surprised and curious. Very few subjects expressed feelings of pride or excitement on the first day of menstruation, but instead, feelings of embarrassment (especially when buying or disposing of pads) were reported, with the postmenarcheal girls indicating that they hated having a period. The feelings of embarrassment that are apparent when attempting to manage menstruation are directly related to the environmental conditions at school which have been previously discussed. Believing that menarche would make them grown-up was indicated by premenarcheal girls, yet postmenarcheal girls reported they did not feel any different, and this finding was also discussed by Whisnant and Zegans (1975). Discussing the different range of possible responses with premenarcheal girls and emphasizing that there is no *'right'* feeling may make the initial experience a little easier and validate their mixed feelings as *'O. K.'*

Symptoms

The premenarcheal girls in this sample expected to have some physical and affective feelings at the time of menstruation, believing they would sometimes have cramps and feel moody and be a little sick to their stomach. The majority of postmenarcheal girls believed they felt no different, yet others did suggest feelings of moodiness and that the cramps were very painful. Socialization of the premenarcheal girl to the type of symptoms that may accompany menstruation is important so they will not be surprised if some are experienced. However, although advance knowledge in this area is beneficial,

we have to be cautious of the extent to which we warn of these *'menstrual symptoms'* because having expectations could in fact bring about some menstrual distress (Brooks-Gunn & Ruble, 1983).

Menstrual Attitude Questionnaire

As indicated in the results section, the data obtained from this tool did not provide sufficient information to make many conclusions about the subjects' attitudes concerning menstruation. One finding is that the scale that related to menstruation being natural had a moderately high reliability of .71, and a significant difference did appear between responses of pre- and postmenarcheal girls for this category. Postmenarcheal girls believed that menstruation was more natural than premenarcheal girls; however, neither group thought it was *'very natural.'* This finding suggests that experience with menstruation may make it seem more acceptable. In the Brooks-Gunn and Ruble (1980) study the adolescent girls did perceive menstruation as natural, and overall, they suggested that the initial experience with menstruation had little effect on attitudes. The finding by Brooks-Gunn & Ruble (1980) conflicted with the information received in this study, but because problems were evident with the rest of the categories in the questionnaire, the reliability and validity of this result is questionable.

Question and Answer Period

The questions received from the subjects indicated the areas in which they required further information. The question and answer period was a valuable technique which allowed the girls to have their questions answered in a non-threatening environment, which they otherwise might have been too embarrassed to ask. One unexpected topic that received nine questions from the grade eight girls was that about sexual intercourse and birth control. Questions about birth control and the *'safe'* times to have sex were expressed. One girl wrote, "I'm pregnant what do I do?" This question was not read during the discussion period; however, when the investigator saw this question, she was

concerned and, for ethical reasons, felt something should be done. After consulting with two committee members, the principal of the school that the student attended was called and told about the nature of the question, plus the content of the other questions that were expressed about sexuality. The investigator suggested to the principal that another session on the topic of sexuality and menstruation be given by the community health nurse or another qualified individual. Obviously, there was a great need on the part of the grade eight girls to have more information about sexuality as the questions indicated they were uninformed, as well as, misinformed.

Implications for Nursing Practice and School Health

Data obtained in this study have strong implications for nurses involved in school health education. Reports from adolescent girls indicate they are not as prepared as they could be for such an important life event. Deciding what community health nurses in the schools can do to help this situation is an important issue. At present, the responsibility of teaching menstrual education to adolescent girls in Alberta is the responsibility of the school teacher. Although the situation varies from school to school, the community health nurse is often invited as a guest speaker but is frequently given only one class period to prepare the adolescent girls for menstruation. From the findings of this study and those of other researchers, this time allotment is not enough or the reinforcement provided after the class is not enough or the methods of delivering information are inadequate for learning.

One suggestion that may help this situation is to have menstrual education a joint effort between the school teacher and the community health nurse. Health education and health promotion in the community (including the schools) are important components in the day to day job of a community health nurse. Within this framework of health education, menstrual education must be considered a dynamic process that cannot be a one-time event. For adolescent girls, coping with menstruation is an on-going process

throughout which they need advice and support. The school teacher is a significant person that is in contact with the girls every day, unlike the community health nurse who may visit only once a week. Therefore, by having a joint effort between the school teacher and community health nurse, the girls will receive menstrual education from the community health nurse with the school teacher included and also have the school teacher available, as a support person, on a day to day basis.

Menstruation is not an event that occurs in isolation but is affected by many other aspects of adolescent girls that have an impact on their coping and management of menstruation. Examination of seven variables in this study (coping, preparation, feelings, communication, attitudes, symptoms and school facilities) provided important data which fits in with the health education framework. The study reinforces the view that simply providing information about menstruation is not enough. The community health nurse can act as a significant resource person in providing the school teachers with recent research findings about menstrual education, for example, identifying the variables that may affect coping with menstruation.

Some recommendations for menstrual education based on the results of this research study is as follows:

1. To offer initial menstrual education pre-menarche. Although the girls in this study suggest menstruation be taught in grade five, the age of menarche can be very early for some girls (ten girls in this study had menarche before the age of 11) and therefore should be acknowledged in grade four.
2. To provide more than one class before menarche, and as well, follow-up classes or audio/video presentations (for independent study) for girls only, once they have reached menarche. At present, there is often only one class in grade five that is offered for girls. A second class dealing with how to cope and manage menstruation is required after the onset of menarche as indicated by the

types and number of questions the girls had during the question and answer period.

3. To acknowledge words and phrases familiar to the girls when discussing menstruation, such as *'that time of the month'* but use the proper words of *'menstruation'* and *'period'* in the formal education process to avoid reinforcing menstruation as a secret topic and to assist the girls in acquiring a vocabulary for these new experiences.
4. To be aware of the egocentric nature of early adolescent girls during the discussion about menstruation and be sensitive to their desire for privacy.

In addition for the need of improved menstrual education, the community health nurse or the school teacher, must play the role of an advocate for adolescent girls in terms of advising the school boards of the revisions that are necessary for the maintenance of privacy for the girls in the washrooms as well as the changing rooms. Someone needs to speak on behalf of the girls who have been conditioned to believe that appropriate communication concerning menstruation is silence.

Recommendations for Further Nursing Research

The issue of menstrual education is a relatively unexplored area. Research findings suggest that being well prepared for menarche will lead to a more positive experience; however, further research is required to explore what type of information and format of teaching would lead to adolescent girls' self-reports of being well prepared after they have experienced menarche. An evaluation of the present programs in existence would be an initial step before a new menstrual education program could be developed and tested. Longitudinal research studies would provide the data necessary to assess the pre- and postmenarcheal response to menarche. Several teaching tools and methods of teaching would be developed and tested on several groups of subjects. This is needed to ascertain which tool and method of teaching would provide the most positive reports of

the menarcheal experience. Because health education and promotion are a large part of the work carried out by community health nurses, they would be the appropriate individuals to initiate and carry out such a project.

Most of the research in the area of menstruation has been carried out on healthy, white, middle-class adolescent girls. Data about the experience of menarche for girls in other cultural groups and social classes are necessary to obtain a more comprehensive picture about menarche. As well, conducting research with handicapped girls as subjects would yield important information concerning their special learning needs and coping abilities. This information would be beneficial for community health nurses in their teaching and support of adolescent girls of different cultural and health groups during their initial experience with menarche.

The tool used in this study to assess the attitudes of adolescent girls about menstruation (modified MAQ) was found to be inadequate. A research tool needs to be developed to assess the attitudes of early adolescent girls giving a more accurate picture of their thoughts and ideas about menstruation.

The final implication for nursing research would be to interview mothers and fathers of daughters of premenarcheal age to assess their needs in terms of preparing their daughters for menarche. Results of this research would have implications for community health nurses. Perhaps parents need some guidance in deciding how to prepare their daughters for menarche, for example, when to start, how to initiate the conversation and what information to include.

Summary of the Study

The use of paper and pencil questionnaires was an effective method in eliciting responses from adolescent girls concerning their perceptions about menstruation. In addition, including short answer questions in the MPRT questionnaire and having a question and answer period provided the adolescent girls with an opportunity to relate

their suggestions and concerns in a safe and non-threatening environment.

The two most important themes apparent in this research are that adolescent girls do not perceive themselves as well prepared for menarche and, that the school facilities do not support the girls in their adjustment to menstruation by providing the means to assist them in maintaining their privacy. Acknowledgement of these two areas, with action taken by the appropriate people, for example, community health nurses and the school board, would be beneficial for achieving the goal of having girls well prepared for menarche and enhancing their ability to cope.

The implications for nursing practice and research show the role that community health nurses can play in promoting and advancing menstrual education. Achieving healthy attitudes and behaviors in individuals in the community through health education and health counselling is the goal of every community health nurse. Menstruation is a fact of life for all females, therefore, a goal of community health nursing in schools, should be to ensure that adequate preparation for menarche is achieved and that the environmental conditions are conducive to maintaining privacy to young women experiencing menstruation.

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Appendix A

Summary Statistics for the Menstrual Perceptions Research Tool

Table 1-A
Questions in the Feelings Category of the MPRT

Questions/Responses	Premenarcheal n	(%)	Postmenarcheal n	(%)	Total n	(%)
2. When Ann first saw her period she:						
a) felt excited that it had come.	9	12.2	2	3.0	11	7.8
b) didn't think it was any big deal.	20	27.0	23	34.3	43	30.5
c) felt scared, thought something was wrong.	13	17.6	6	9.0	19	13.5
d) felt disgusted and gross.	8	10.8	9	13.4	17	12.1
e) felt surprised.	13	17.6	13	19.4	26	18.4
f) felt curious, wondered if this was her period.	8	10.8	14	20.9	22	15.6
No Response:	3	4.1	0	0.0	3	2.1
4. On the first day of her period Ann: (you may choose more than one response)						
a) felt more like a grown-up.	29	39.2	9	13.4	38	27.0
b) felt embarrassed.	30	40.5	24	35.8	54	38.3
c) felt disgusted and gross.	7	9.5	5	7.5	12	8.5
d) felt proud.	8	10.8	5	7.5	13	9.2
e) felt no older than usual.	17	23.0	19	28.4	36	25.5
f) was excited that she had her period.	8	10.8	4	6.0	12	8.5
g) felt no different than usual.	18	24.3	20	29.9	38	27.0
h) hated having her period.	19	25.7	30	44.8	49	34.8

(table continues)

Questions/Responses	Premenarcheal n	(%)	Postmenarcheal n	(%)	Total n	(%)
8. Ann felt that wearing a pad:						
a) was a bother.	12	16.2	35	52.2	47	33.3
b) made no difference.	13	17.6	9	13.4	22	15.6
c) made her feel different and strange.	45	60.8	19	28.4	64	45.4
d) made her feel proud.	3	4.1	3	4.5	6	4.3
No Response:	1	1.4	1	1.4	2	1.4
12. Ann had to dispose of her pad in the bathroom garbage can. Ann:						
a) didn't care, felt it was no big deal.	5	6.8	10	14.9	15	10.6
b) felt proud.	3	4.1	6	9.0	9	6.4
c) felt embarrassed.	65	87.8	49	73.1	114	80.9
No Response:	1	1.4	2	3.0	3	2.1
16. Ann needed to get a pad from the pad dispenser in the girls washroom which was in full view of everyone. Ann:						
a) didn't care, felt it was no big deal.	6	8.1	7	10.5	13	9.2
b) felt proud.	0	0.0	1	1.5	1	0.7
c) felt embarrassed to get one.	67	90.5	56	83.6	123	87.2
No Response:	1	1.4	3	4.5	4	2.8

(table continues)

Questions/Responses	Premenarcheal n	Premenarcheal (%)	Postmenarcheal n	Postmenarcheal (%)	Total n	Total (%)
30. If Ann went to gym class she felt:						
a) no different.	26	35.1	27	40.3	53	37.6
b) proud that everyone may notice that she was on her period.	1	1.4	5	7.5	6	4.3
c) embarrassed that everyone may notice she was on her period.	45	60.8	35	52.2	80	56.7
No Response:	2	2.7	0	0.0	2	1.4
35. Ann went to the drugstore to buy some pads or tampons. Ann:						
a) felt proud.	1	1.4	1	1.5	2	1.4
b) thought it was no big deal.	11	14.9	10	14.9	21	14.9
c) felt a little embarrassed.	47	63.5	36	53.7	83	58.9
d) felt so embarrassed she would not go.	15	20.3	20	29.9	35	24.8
No Response:	0	0.0	0	0.0	0	0.0

Table 1-B
Questions in the Communication Category

Questions/Responses	Premenarcheal n	(%)	Postmenarcheal n	(%)	Total n	(%)
17. Ann wanted to:						
a) keep her period secret from everyone at school.	35	47.3	25	37.3	60	42.6
b) tell only her best friend at school about her period.	27	36.5	18	26.9	45	31.9
c) tell just a few friends about her period.	9	12.2	19	28.4	28	19.9
d) tell all her friends about her period.	2	2.7	5	7.5	7	5.0
No Response:	1	1.4	0	0.0	1	0.7
18. The first person Ann told about her period was: (please pick only one)						
a) her sister.	2	2.7	3	4.5	5	3.6
b) her best friend.	7	9.5	9	13.4	16	11.4
c) her boyfriend.	2	2.7	3	4.5	5	3.6
d) her mother.	58	78.4	51	76.1	109	77.3
e) her father.	0	0.0	0	0.0	0	0.0
f) her school teacher.	1	1.4	0	0.0	1	0.7
g) the school nurse.	0	0.0	0	0.0	0	0.0
h) other person.	2	2.7	1	1.5	3	2.1
No Response:	2	2.7	0	0.0	2	1.4

(table continues)

Questions/Responses	Premenarcheal n	Premenarcheal (%)	Postmenarcheal n	Postmenarcheal (%)	Total n	Total (%)
19. If Ann wanted to talk to her mother about her period she:						
a) could never talk to her mother about her period.	5	6.8	5	7.5	10	7.1
b) found it very difficult to talk to her mother about her period.	9	12.2	13	19.4	22	15.6
c) found it a little difficult to talk to her mother about her period.	34	46.0	24	35.8	58	41.1
d) could easily talk to her mother about her period.	25	33.8	25	37.3	50	35.5
No Response:	1	1.4	0	0.0	1	.7
20. If Ann wanted to discuss her period she:						
a) could never talk to her father about her period.	51	68.9	48	71.6	99	70.2
b) found it very difficult to talk to her father about her period.	14	18.9	12	17.9	26	18.4
c) found it a little difficult to talk to her father about her period.	5	6.8	4	6.0	9	6.4
d) could easily talk to her father about her period.	2	2.7	3	4.5	5	3.6
No Response:	2	2.7	0	0.0	2	1.4
21. When Ann was having her period: she:						
a) would never talk to a male teacher about her period.	54	73.0	49	73.1	103	73.1

(table continues)

Questions/Responses	Premenarcheal n	(%)	Postmenarcheal n	(%)	Total n	(%)
21. cont'd.						
b) would find it very difficult to tell a male teacher if she had a problem with her period.	14	18.9	13	19.4	27	19.2
c) would find it a little difficult to talk to a male teacher if she had a problem with her period.	4	5.4	5	7.5	9	6.4
d) could easily tell a male teacher if she had a problem with her period.	1	1.4	0	0.0	1	0.7
No Response:	1	1.4	0	0.0	1	0.7

Table 1-C
Questions in the Symptoms Category

Questions/Responses	Premenarcheal n	(%)	Postmenarcheal n	(%)	Total n	(%)
22. Was Ann moody during her period?						
a) no.	7	9.5	15	22.4	22	15.6
b) sometimes.	47	63.5	35	52.2	82	58.2
c) yes.	10	13.5	16	23.9	26	18.4
No Response:	10	13.5	1	1.5	11	7.8
23. During her period Ann felt:						
a) no different, was normal.	31	41.9	34	50.8	65	46.1
b) jumpy.	11	14.9	12	17.9	23	16.3
c) in a bad mood.	25	33.8	20	29.9	45	31.9
No Response:	7	9.5	1	1.5	8	5.7
24. During her period Ann felt:						
a) no sickness at all.	17	23.0	18	26.9	35	24.8
b) a little sick to her stomach.	45	60.8	38	56.7	83	58.9
c) very sick to her stomach.	7	9.5	11	16.4	18	12.8
No Response:	5	6.8	0	0.0	5	3.6
25. Did Ann have cramps during her period?						
a) no.	10	13.5	11	16.4	21	14.9
b) sometimes.	39	52.7	33	49.3	72	51.1
c) yes.	18	24.3	23	34.3	41	29.1
No Response:	7	9.5	0	0.0	7	5.0

(tables continues)

Questions/Responses	Premenarcheal n	(%)	Postmenarcheal n	(%)	Total n	(%)
26. If Ann had cramps during her period, the cramps were:						
a) slightly painful.	37	50.0	34	50.7	71	50.4
b) moderately painful.	21	28.4	19	28.4	40	28.4
c) very painful.	7	9.5	12	17.9	19	13.5
No Response:	9	12.2	2	3.0	11	7.8

Table 1-D
Questions in the Coping Category

Questions/Responses	Premenarcheal n	(%)	Postmenarcheal n	(%)	Total n	(%)
9. Ann didn't like wearing pads. Ann wanted to try tampons: (you may pick more than one)						
a) but she didn't know how to use them.	37	50.0	27	40.3	64	45.4
b) but her mother wouldn't let her try them.	7	9.5	13	19.4	20	14.2
c) but she was afraid to try them.	46	62.2	31	46.3	77	54.6
d) and did try them and found them better to use than pads.	10	13.5	16	23.9	26	18.4
e) and tried them but found they were too hard to use.	5	6.8	8	11.9	13	9.2
10. In school the next day Ann:						
a) made sure she had some money to get a pad from the dispenser in the bathroom.	15	20.3	2	3.0	17	12.1
b) was prepared by bringing pads from home.	54	73.0	61	91.0	115	81.6
c) had to ask the school nurse or school teacher for pads.	2	2.7	4	6.0	6	4.3
d) had to borrow pads from a friend.	0	0.0	0	0.0	0	0.0
No Response:	3	4.1	0	0.0	3	2.1
27. If Ann had cramps during her period she:						
a) had to stay home in bed.	2	2.7	3	4.5	5	3.6

(table continues)

Questions/Responses	Premenarcheal n	(%)	Postmenarcheal n	(%)	Total n	(%)
27. cont'd.						
b) she had to stay home but could get out of bed.	11	14.9	7	10.5	18	12.8
c) could go to school but could not go to gym.	29	39.2	18	26.9	47	33.3
d) could go to school and to gym.	26	35.1	37	55.2	63	44.7
No Response:	6	8.1	2	3.0	8	5.7
28. If Ann had cramps during her period she:						
a) had to take something to help ease the pain such as Aspirin or Tylenol.	25	33.8	22	32.8	47	33.3
b) had to take something stronger than Aspirin or Tylenol such as 222's or 292's.	4	5.4	4	6.0	8	5.7
c) did not have to take anything.	34	46.0	38	56.7	72	51.1
No Response:	11	14.9	2	3.0	13	9.2
29. Ann had gym class the next day. Ann:						
a) did not go to gym because of her period.	24	32.4	16	23.9	40	28.4
b) went to gym class even though she had her period.	49	66.2	51	76.1	100	70.9
No Response:	1	1.4	0	0.0	1	0.7

(table continues)

Questions/Responses	Premenarcheal n	Premenarcheal (%)	Postmenarcheal n	Postmenarcheal (%)	Total n	Total (%)
31. Ann had gymnastics after school. Ann:						
a) did not go to gymnastics.	26	35.1	28	41.8	54	38.3
b) went to gymnastics.	46	62.2	39	58.2	85	60.3
No Response:	2	2.7	0	0.0	2	1.4
32. Ann had Pathfinders that night. Ann:						
a) did not go to Pathfinders.	11	14.9	7	10.5	18	12.8
b) went to Pathfinders.	59	79.7	60	89.6	119	84.4
No Response:	4	5.4	0	0.0	4	3.6
33. Ann had a school dance to go to on the weekend and she would still be on her period. Ann:						
a) would not go to the school dance.	5	6.8	1	1.5	6	4.3
b) still planned to go to the school dance.	69	93.2	66	98.5	135	95.7
No Response:	0	0.0	0	0.0	0	0.0
34. Ann had planned to go swimming that weekend and she would still be on her period. Ann:						
a) would not go swimming.	51	68.9	49	73.1	100	70.9
b) still planned to go swimming.	23	31.1	17	25.4	40	28.4
No Response:	0	0.0	1	1.5	0	0.7

(table continues)

Questions/Responses	Premenarcheal n	(%)	Postmenarcheal n	(%)	Total n	(%)
36. When Ann was having her period she:						
a) did not shower or have a bath more often than usual.	16	21.6	23	34.3	39	27.7
b) showered or had a bath more often than usual.	53	71.6	42	62.7	95	67.4
c) did not have a bath or a shower at all.	1	1.4	2	3.0	3	2.1
No Response:	4	5.4	0	0.0	4	2.8

Table 1-E
Questions in the School Category

Questions/Responses	Premenarcheal n	(%)	Postmenarcheal n	(%)	Total n	(%)
11. At Ann's school the pad disposal unit:						
a) there was no pad disposal, just the garbage can.	20	27.0	23	34.3	43	30.5
b) was outside the bathroom cubicle.	28	37.8	17	25.4	45	31.9
c) was inside the bathroom cubicle.	24	32.4	27	40.3	51	36.2
No Response:	2	2.7	0	0.0	2	1.4
13. At Ann's school:						
a) there was no pad dispenser in the bathroom.	7	9.5	15	22.4	22	15.6
b) the pad dispenser was outside the bathroom cubicle.	46	62.2	34	50.8	80	56.7
c) the pad dispenser was inside each bathroom cubicle.	19	25.7	18	26.9	37	26.2
No Response:	2	2.7	0	0.0	2	1.4
14. If there was a pad dispenser at Ann's school it:						
a) was always empty or broken.	35	47.3	32	47.8	67	47.5
b) was sometimes empty.	26	35.1	22	32.8	48	34.0
c) always had a pad in it.	9	12.2	5	7.5	14	9.9
No Response:	4	5.4	8	11.9	12	8.5

(table continues)

Questions/Responses	Premenarcheal n	(%)	Postmenarcheal n	(%)	Total n	(%)
15. At Ann's school the girls:						
a) had to make sure they brought pads from home or could borrow them from a friend because none were provided at school.	19	25.7	23	34.3	42	29.8
b) had to ask the school nurse or teacher for pads because there was no pad dispenser in the school.	10	13.5	9	13.4	19	13.5
c) could buy pads from the dispenser in the washroom.	44	59.5	32	47.8	76	53.9
No Response:	1	1.4	3	4.5	4	2.8

Table 1-F
Questions in the Preparation Category

Questions/Responses	Premenarcheal n	(%)	Postmenarcheal n	(%)	Total n	(%)
1. When Ann first saw her period she:						
a) knew what it was.	70	94.6	60	89.6	130	92.2
b) didn't know what it was.	4	5.4	7	10.5	11	7.8
No Response:	0	0.0	0	0.0	0	0.0
3. Ann felt:						
a) well prepared for her period.	5	6.8	14	20.9	19	13.5
b) somewhat prepared for her period.	49	66.2	29	43.3	78	55.3
c) unprepared for her period.	19	25.7	24	35.8	43	30.5
No Response:	1	1.4	0	0.0	1	0.7
5. Ann knew what her period was mainly because: (please pick only one)						
a) she learned about it in school.	30	40.5	32	47.8	62	44.0
b) her mother had explained it to her.	26	35.1	25	37.3	51	36.2
c) her older sister had told her about it.	3	4.1	1	1.5	4	2.8
d) her friends told her what it was.	4	5.4	5	7.5	9	6.4
e) she read about it on her own.	4	5.4	0	0.0	4	2.8
f) she didn't know what it was, no one told her.	0	0.0	0	0.0	0	0.0
g) another person.	2	2.7	1	1.1	3	2.1
No Response:	5	6.8	0	4.5	5	5.7

(table continues)

Questions/Responses	Premenarcheal n	(%)	Postmenarcheal n	(%)	Total n	(%)
6. When Ann first saw her period:						
a) she didn't know what to do.	28	37.8	16	23.9	44	31.2
b) she knew what to do.	45	60.8	51	76.1	96	68.1
No Response:	1	1.4	0	0.0	1	0.7
7. When Ann realized it was her period:						
a) she did not have any supplies ready.	27	36.5	24	35.8	51	36.2
b) she had supplies ready but did not know how to use them.	16	21.6	5	7.5	21	14.9
c) she had supplies ready and knew how to use them.	29	39.2	38	56.7	67	47.5
No Response:	2	2.7	0	0.0	2	1.4
37. Ann learned the most about her period from:						
a) her friends.	3	4.1	4	6.0	7	5.0
b) her sister.	1	1.4	3	4.5	4	2.8
c) the health class at school.	23	31.1	14	20.9	37	26.2
d) her mother.	25	33.8	26	38.8	51	36.2
e) books and pamphlets.	8	10.8	10	14.9	18	12.8
f) the school nurse.	7	9.5	3	4.5	10	7.1
g) did not learn about it from anyone.	1	1.4	2	3.0	3	2.1
h) another person.	4	5.4	4	6.0	8	5.7
No Response:	2	2.7	1	1.5	3	2.1

(table continues)

Questions/Responses	Premenarcheal n	Premenarcheal (%)	Postmenarcheal n	Postmenarcheal (%)	Total n	Total (%)
38. What things did Ann's mother tell her about periods? (you may pick more than one answer)						
a) how to put on a pad.	30	40.5	34	50.8	64	45.4
b) how to use tampons.	11	14.9	18	26.9	29	20.6
c) how a period may feel.	35	47.3	33	49.3	68	48.2
d) timing of her periods.	31	41.9	36	53.7	67	47.5
e) what she can and cannot do while she is on her period.	20	27.0	17	25.4	37	26.2
f) what emotions she may feel when she is on her period.	30	40.5	27	40.3	57	40.4
g) appropriate hygiene when she is on her period.	16	21.6	26	38.8	42	29.8
h) how to be prepared for her period.	41	55.4	34	50.8	75	53.2
i) how it is related to growing-up.	30	40.5	33	49.3	63	44.7
j) other.	8	9.5	3	3.0	11	6.3
39. Ann wondered when she should expect her next period. Ann:						
a) did not have any idea how to figure it out.	25	33.8	16	23.9	41	29.1
b) knew how to figure it out.	48	64.9	50	74.6	98	69.5
No Response:	1	1.4	1	1.5	2	1.4

(table continues)

Questions/Responses	Premenarcheal n	(%)	Postmenarcheal n	(%)	Total n	(%)
40. Ann felt the information in the books and pamphlets was:						
a) Ann did not read any books or pamphlets.	17	23.0	14	20.9	31	22.0
b) too difficult to understand.	6	8.1	2	3.0	8	5.7
c) a little difficult to understand.	24	32.4	6	9.0	30	21.3
d) about right and easy to understand.	25	33.8	45	67.2	70	49.7
No Response:	2	2.7	0	0.0	2	1.4
41. The film Ann saw at school about menstruation and growing-up was:						
a) Ann did not see a film.	20	27.0	10	14.9	30	21.3
b) too hard to understand.	6	8.1	1	1.5	7	5.0
c) was too simple and boring.	7	9.5	19	28.4	26	18.4
d) clear and easy to understand.	40	54.1	37	55.2	77	54.6
No Response:	1	1.4	0	0.0	1	0.7
42. The film Ann saw at school about menstruation and growing-up was:						
a) Ann did not see a film.	18	24.3	9	13.4	27	19.2
b) not helpful.	2	2.7	9	13.4	11	7.8
c) a little helpful.	32	43.2	31	46.3	63	44.7
d) very helpful.	21	28.4	18	26.9	39	27.7
No Response:	1	1.4	0	0.0	1	0.7

(table continues)

Questions/Responses	Premenarcheal n	Premenarcheal (%)	Postmenarcheal n	Postmenarcheal (%)	Total n	Total (%)
43. The class at school on menstruation and growing-up:						
a) Ann did not have a class on menstruation in school.	8	10.8	8	11.9	16	11.3
b) did not go over everything and at the end of class Ann still had questions about periods.	30	40.5	20	29.9	50	35.5
c) did not teach anything new.	7	9.5	17	25.4	24	17.0
d) went over everything Ann wanted to know about periods.	27	36.5	21	31.3	48	34.0
No Response:	2	2.7	1	1.5	3	2.1
44. Ann wished she knew more about: (you may choose more than one answer)						
a) timing of her periods.	37	50.0	21	31.3	58	41.1
b) things that could go wrong while she was on her period.	46	62.2	31	46.3	77	54.6
c) how to keep her period secret from others.	22	29.7	18	26.9	40	28.4
d) how to act when she was on her period.	30	40.5	15	22.4	45	31.9
e) how to avoid the problem of bleeding through her clothes.	51	68.9	43	64.2	94	66.7
f) other.	5	6.8	5	7.5	10	7.1

(table continues)

Questions/Responses	Premenarcheal n	(%)	Postmenarcheal n	(%)	Total n	(%)
45. Ann wished the books and pamphlets about periods contained: (you may pick more than one answer)						
a) information on how a period actually felt.	34	45.9	17	25.4	51	36.2
b) more on what was happening to your body when you are on your period.	27	36.5	18	26.9	45	31.9
c) more on how to cope with your period.	39	52.7	42	62.7	81	57.5
d) there was enough information in the books already.	3	4.1	15	22.4	18	12.8
e) other.	6	5.4	0	0.0	6	2.8
46. Ann thought menstruation should begin to be taught in:						
a) grade 4.	8	10.8	9	13.4	17	12.1
b) grade 5.	36	48.6	29	43.3	65	46.1
c) grade 6.	26	35.1	22	32.8	48	34.0
d) grade 7.	4	5.4	6	9.0	10	7.1
No Response:	0	0.0	1	1.5	1	0.7
47. Ann would like the health class about periods to include:						
a) both boys and girls.	9	12.2	15	22.4	24	17.0
b) just girls.	39	52.7	20	29.9	59	41.8
c) boys and girls separately.	23	31.1	31	46.3	54	38.3
No Response:	3	4.1	1	1.5	4	2.8

Appendix B

Revised Menstrual Perceptions Research Tool

The MPRT was revised based on the questions asked and comments made during the period of data collection. A total of nine questions (#11, 12, 13, 14, 17, 22, 30, 36, 37) received minor wording changes to help clarify the ideas presented in each question. The seven questions that related to the use of pads during menstruation were changed to include the use of tampons as well (#10, 11, 12, 13, 14, 15, 16). Six questions (#8, 18, 25, 38, 44, 45) had one or more responses added to provide more comprehensive selection. For example, the response *'did not tell her anything'* was added to question #38 (What did Ann's mother tell her about menstruation?), because five subjects wrote this response in the *'other '* category when completing the questionnaire. In addition to adding an extra response to #8, it was now permissible to select multiple responses.

One question , #32, was deleted from the questionnaire because it was found that several girls did not know what Pathfinders was and, as well, others would not go even if they were not menstruating. A question that was added to the communication category related to Ann discussing her period with a female teacher. This addition was made because it was felt that it was important to know if discussion with a teacher was easy or difficult and if the sex of the teacher made a difference. Two questions were added to the preparation category concerning the adequacy of information Ann received from her mother for preparation of menarche.

The coping category was decreased from 13 to 10 questions. Question #32 was dropped from the question as discussed above and two others, #7 and #39, were transferred to the preparation category which now has a total of 18 questions. As indicated above, one question was added to the communication category to increase the total number to six questions.

Ann just started her period for the first time. Please answer the following questions as if you were Ann.

(Please do not write in the margin)

1. When Ann first saw her period she :
(1) ☐ didn't know what it was.
(2) ☐ knew what it was. 1__

2. When Ann first saw her period she mostly : (please pick one answer) 2__
(1) ☐ felt excited that it had come.
(2) ☐ didn't think it was any big deal.
(3) ☐ felt scared, she thought something was wrong.
(4) ☐ felt disgusted and gross.
(5) ☐ felt surprised.
(6) ☐ felt curious, wondered if this was her period.

3. Ann felt :
(1) ☐ well prepared for her period.
(2) ☐ somewhat prepared for her period.
(3) ☐ unprepared for her period. 3__

4. On the first day of her period Ann : (you may choose more than one answer)
☐ felt more grown-up. 4__
☐ felt embarrassed. 5__
☐ felt disgusted and gross. 6__
☐ felt proud. 7__
☐ felt no older than usual. 8__
☐ was excited that she had her period. 9__
☐ felt no different than usual. 10__
☐ hated having her period. 11__

5. Ann knew what her period was mainly because : (please pick only one answer)
(1) ☐ she learned about it in school.
(2) ☐ her mother had explained it to her.
(3) ☐ her older sister had told her about it. 12__
(4) ☐ her friends had told her what it was.
(5) ☐ she read about it on her own.
(6) ☐ she didn't know what it was, no one had told her.
(7) ☐ another person told her (please write down the relationship of that person, for example father, aunt, grandmother etc.) _____.

6. When Ann first saw her period :
(1) ☐ she didn't know what to do. 13__
(2) ☐ she knew what to do.

7. When Ann realized it was her period : 14__
(1) ☐ she did not have any supplies ready.
(2) ☐ she had supplies ready but did not know how to use them.
(3) ☐ she had supplies ready and knew how to use them.

8. Ann felt that wearing a pad : (you may pick more than one answer)
☐ was a bother. 15__
☐ did not make her feel any different. 16__
☐ made her feel different and strange. 17__
☐ made her feel proud. 18__
☐ was uncomfortable. 19__

9. Ann didn't like wearing pads. Ann wanted to try tampons : (you may pick more than one answer)
☐ but she didn't know how to use them. 20__
☐ but her mother wouldn't let her try them. 21__
☐ but she was afraid to try them. 22__
☐ and did try them and found them better to use than pads. 23__
☐ and tried them but found they were too hard to use. 24__

10. In school the next day Ann :
(1) ☐ made sure she had some money to get a pad or a tampon from the dispenser in the bathroom. 25__
(2) ☐ was prepared by bringing some pads or tampons from home.
(3) ☐ had to ask the school teacher or school nurse for a pad or tampon.
(4) ☐ had to borrow a pad or tampon from a friend.

11. Ann had to dispose of her pad or tampon wrapper in the disposal unit which was:
(1) ☐ the garbage can in the washroom, there was nothing else available.
(2) ☐ outside the bathroom cubicle in the washroom area.
(3) ☐ inside the bathroom cubicle. 26__

12. Ann had to dispose of her pad or tampon wrapper in the bathroom garbage can in front of many girls. Ann : 27__
(1) ☐ didn't care, felt it was no big deal.
(2) ☐ felt proud.
(3) ☐ felt embarrassed.

13. At Ann's school : 28__
(1) ☐ there was no pad or tampon dispenser in the washroom.
(2) ☐ the pad or tampon dispenser was outside the bathroom cubicle in the washroom area.
(3) ☐ the pad or tampon dispenser was in each bathroom cubicle.

14. If there was a pad or tampon dispenser at Ann's school it : 29__
(1) ☐ was always empty or broken.
(2) ☐ was sometimes empty or broken.
(3) ☐ always had a pad or tampon in it and was working.

15. At Ann's school the girls: 30__
(1) ☐ had to make sure they brought pads or tampons from home or could borrow them from a friend because none were provided at school.
(2) ☐ had to ask the school nurse or teacher for a pad or tampon because there was no pad or tampon dispenser in the school.
(3) ☐ could buy pads or tampons from the dispenser in the washroom.

16. Ann needed to get a pad or tampon from the dispenser in the girls washroom which was in full view of everyone. Ann : 31__
(1) ☐ didn't care, felt it was no big deal.
(2) ☐ felt proud.
(3) ☐ felt embarrassed to get one.

17. Ann wanted to : 32__
(1) ☐ keep her period a secret from everyone.
(2) ☐ tell only her best friend about her period.
(3) ☐ tell just a few of her friends about her period.
(4) ☐ tell all her friends about her period.

18. The first person Ann told about her period was : (please pick only one)
(1) ☐ her sister.
(2) ☐ her best friend. 33__
(3) ☐ her boyfriend.
(4) ☐ her mother.
(5) ☐ her father.
(6) ☐ her school teacher.
(7) ☐ the school nurse.
(8) ☐ no one, she would keep it a secret.
(9) ☐ other person; if so please write down the relationship of that person (for example aunt, grandmother etc.) _____.

19. If Ann wanted to discuss her period she :
(1) ☐ could never talk to her mother about her period.
(2) ☐ found it very difficult to talk to her mother about her period.
(3) ☐ found it a little difficult to talk to her mother about her period.
(4) ☐ could easily talk to her mother about her period. 34__

20. If Ann wanted to discuss her period she :
(1) ☐ could never talk to her father about her period.
(2) ☐ found it very difficult to talk to her father about her period. 35__
(3) ☐ found it a little difficult to talk to her father about her period.
(4) ☐ could easily talk to her father about her period.

21.When Ann was having her period:
(1) ☐ would never talk to a female teacher if she had a problem with her period.
(2) ☐ would find it very difficult to talk to a female teacher if she had a problem with her period.
(3) ☐ would find it a little difficult to talk to female teacher if she had a problem with her period. 36__
(4) ☐ she could easily talk to a female teacher if she had a problem with her period.

22. When Ann was having her period : 37__
(1) ☐ would never talk to a male teacher if she had a problem with her period.
(2) ☐ would find it very difficult to talk to a male teacher if she had a problem with her period.
(3) ☐ would find it a little diffcult to talk to a male teacher if she had a problem with her period.
(4) ☐ she could easily talk to a male teacher if she had a problem with her period.

23. Was Ann moody during her period? 38__
(1) ☐ no.
(2) ☐ sometimes.
(3) ☐ yes.

24. During her period Ann felt : 39__
☐ jumpy.
☐ in a bad mood.
☐ no different, was normal.

25. During her period Ann felt : 40__
(1) ☐ no sickness at all.
(2) ☐ a little sick to her stomach.
(3) ☐ very sick to her stomach.

26. Did Ann have cramps during her period? 41__
(1) ☐ no.
(2) ☐ sometimes.
(3) ☐ yes.

27. If Ann had cramps during her period the cramps were : 42__
(1) ☐ slightly painful.
(2) ☐ moderately painful.
(3) ☐ very painful.

28. If Ann had cramps during her period she : 43__
(1) ☐ had to stay home in bed.
(2) ☐ she had to stay home but could get out of bed.
(3) ☐ could go to school but could not go to gym.
(4) ☐ could go to school and go to gym.

29. If Ann had cramps during her period she: 44__
(1) ☐ had to take something to help ease the pain such as Aspirin or Midol.
(2) ☐ had to take something stronger than Aspirin or Midol such as 222's or 292's.
(3) ☐ did not have to take anything for her cramps.

30. Ann had gym class the next day. Ann 45__
(1) ☐ did not go to gym because of her period.
(2) ☐ went to gym class even though she had her period.

31. If Ann went to gym class she felt : 46__
(1) ☐ no different.
(2) ☐ embarrassed that people in the class may notice she was having her period.
(3) ☐ proud that people may notice she was having her period.

32. Ann had gymnastics after school. Ann : 47__
(1) ☐ did not go to gymnastics.
(2) ☐ went to gymnastics.

33. Ann had a school dance to go to on the weekend and she would still be on her period. Ann : 48__
(1) ☐ would not go to the dance.
(2) ☐ still planned to go to the dance.

34. Ann had planned to go swimming that weekend and she would still be on her period. Ann : 49__
(1) ☐ would not go swimming.
(2) ☐ still planned to go swimming.

35. Ann went to the drugstore to buy some pads or tampons. Ann : 50__
(1) ☐ felt proud.
(2) ☐ thought it was no big deal.
(3) ☐ felt a little embarrassed.
(4) ☐ felt so embarrassed she would not go to the drugstore to buy pads or tampons.

36. When Ann was having her period she : 51__
(1) ☐ did not shower or have a bath more often than usual.
(2) ☐ showered or had a bath more often than usual.
(3) ☐ did not have a bath or shower at all.

37. Ann learned the most about her period from : (please pick only one answer)
(1) ☐ her friends. 52__
(2) ☐ her sister .
(3) ☐ the class at school.
(4) ☐ her mother.
(5) ☐ books and pamphlets.
(6) ☐ the school nurse.
(7) ☐ did not learn about it from anyone.
(8) ☐ another person (please write down the relationship of that person to you)
_____.

38. What things did Ann's mother tell her about periods ? (you may check more than one answer)
☐ how to put on a pad. 53__
☐ how to use tampons. 54__
☐ how a period may feel. 55__
☐ timing of her periods, when to expect it each month. 56__
☐ what she can and cannot do while she has her period. 57__
☐ what emotions she may feel when she has her period. 58__
☐ appropriate hygiene when she has her period. 59__
☐ how to be prepared for her period. 60__
☐ how it relates to growing up. 61__
☐ did not tell her anything. 62__
☐ other_____. 63__

39. The information Ann's mother gave her about periods was:
(1) ☐ Ann's mother did not give her any information. 64__
(2) ☐ too difficult to understand.
(3) ☐ a little difficult to understand.
(4) ☐ about right and easy to understand.

40. The information Ann's mother gave her about periods was:
(1) ☐ Ann's mother did not give her any information. 65__
(2) ☐ not helpful.
(3) ☐ a little helpful.
(4) ☐ about right, and easy to understand.

41. Ann wondered when she should expect her next period. Ann :
(1) ☐ did not have any idea how to figure it out .
(2) ☐ knew how to figure it out. 66__

42. Ann felt the information in the books and pamphlets was :
(1) ☐ Ann did not read any books or pamphlets. 67__
(2) ☐ too difficult to understand.
(3) ☐ a little difficult to understand.
(4) ☐ about right, and easy to understand.

43. The film Ann saw at school about menstruation and growing up was : 68__
(1) ☐ Ann did not see a film.
(2) ☐ was too hard to understand.
(3) ☐ was too simple and boring.
(4) ☐ clear and easy to understand.

44. The film Ann saw at school about menstruation and growing up was : 69__
(1) ☐ Ann did not see a film.
(2) ☐ not helpful .
(3) ☐ a little helpful .
(4) ☐ very helpful.

45. The class at school on menstruation and growing up: 70__
☐ went over everything Ann wanted to know about periods.
☐ did not go over everything and at the end of class Ann still had questions about periods.
☐ did not teach anything new.
☐ Ann did not have a class on menstruation in school.

46. Ann wished she knew a lot more about :
(you may choose more than one answer)
☐ the timing of her periods ; when to expect it each month. 71__
☐ things that could go wrong while she was on her period. 72__
☐ how to keep her period secret from others. 73__
☐ how to act when she was on her period. 74__
☐ how to avoid the problem of bleeding through her clothes. 75__
☐ how to use pads and tampons. 76__
☐ how to get rid of cramps. 77__
☐ how it relates to growing up. 78__
☐ other _____. 79__

47. Ann wished the books and pamphlets about periods contained: (you can check more than one answer)

☐ information on how a period actually felt . 80__
☐ more on what was happening to your body when you are on your period. 81__
☐ more on how to cope with your period. 82__
☐ more information on how to use pads and tampons. 83__
☐ there was enough information on the books and pamphlets already. 84__
☐ did not read any books or pamphlets so would not know if any changes were necessary. 85__
☐ other_____. 86__

48. Ann thought menstruation should first <u>begin</u> to be taught in : 87__

(1) ☐ grade 4.
(2) ☐ grade 5.
(3) ☐ grade 6.
(4) ☐ grade 7.

49. Ann would like the health class about periods at school to include : 88__

(1) ☐ both boys and girls
(2) ☐ just girls
(3) ☐ boys and girls separately

Appendix C

Adapted Menstrual Attitude Questionnaire

1 strongly disagree	2 disagree	3 unsure	4 agree	5 strongly agree

Circle One

Debility Category

1. I don't believe that my menstrual period affects/will affect how well I do on tasks in which I have to think. 1 2 3 4 5

3. A girl who feels her mood changes can be explained by her approaching menstrual period is silly. 1 2 3 4 5

4. A girl's performance in sports is not affected by menstruation. 1 2 3 4 5

5. Girls are more tired than usual when they are on their period. 1 2 3 4 5

6. I expect/will expect extra consideration from my friends when I am menstruating. 1 2 3 4 5

7. Menstruation can negatively affect my performance in sports. 1 2 3 4 5

8. I feel/will feel as well as I do during any other time of the month. 1 2 3 4 5

9. I don't/will not allow the fact that I am menstruating to interfere with my usual activities. 1 2 3 4 5

10. Avoiding certain activities during menstruation is often very wise. 1 2 3 4 5

11. I am/will be more easily upset during my premenstrual or menstrual preiods than at other times of the month. 1 2 3 4 5

12. I realize that I cannot expect as much of myself during menstruation compared to other times of the month. 1 2 3 4 5

13. Girls just have to accept the fact that they may not perform as well when they are menstruating. 1 2 3 4 5

37. I expected/expect not to do as well in school during the time I am/will be menstruating. 1 2 3 4 5

38. I lose/will probably lose some time from school work because of not feeling well during menstruation. 1 2 3 4 5

1 strongly disagree	2 disagree	3 unsure	4 agree	5 strongly agree

Circle One

Debility Category cont'd.

39. Starting to menstruate is/will be upsetting because it is no longer as easy to play rough house games with the boys. 1 2 3 4 5

40. Starting to menstruate is/will be upsetting because I can not/will not be able to act like one of the boys. 1 2 3 4 5

42. I feel/will feel unclean when I am menstruating. 1 2 3 4 5

Anticipation , Predication Category

2. I have learned/or will learn to know about my menstrual period by the mood swings which come before it. 1 2 3 4 5

23. I can/will tell my period is approaching because of breast tenderness, backache, cramps or other physical signs. 1 2 3 4 5

24. Most girls show a weight gain just before or during menstruation. 1 2 3 4 5

26. Cramps are bothersome only if you pay attention to them. 1 2 3 4 5

27. I barely notice/or will notice the minor physical/body effects of my menstrual period. 1 2 3 4 5

43. My own moods are not/will not be influenced in any major way by the phase of menstrual cycle. 1 2 3 4 5

1 strongly disagree	2 disagree	3 unsure	4 agree	5 strongly agree

Circle One

Bothersome Category

14. Menstruation is just something I will have to put up with. 1 2 3 4 5

15. In some ways I enjoy/expect to enjoy my menstrual periods. 1 2 3 4 5

16. Men have a real advantage in not having a menstrual period. 1 2 3 4 5

17. I hope that it will be possible someday to get a menstrual period over within a few minutes. 1 2 3 4 5

18. The only thing menstruation is good for is/will be to let me know that I'm not pregnant. 1 2 3 4 5

41. I am/will be embarrassed by the practical problems associated with menstruation, e.g. changing pads, going to the bathroom. 1 2 3 4 5

Natural Category

19. Menstruation provides a way for me to keep in touch with my body. 1 2 3 4 5

20. Menstruation allows girls to be more aware of their bodies. 1 2 3 4 5

21. Menstruation is an obvious example of the normal functioning of girls' bodies. 1 2 3 4 5

22. The monthly flow of menstruation is an indication of a girl's general good health. 1 2 3 4 5

33. The experience of menstruation is/will be more positive than I have been lead to believe by others. 1 2 3 4 5

34. Starting to menstruate made me/will make me feel happy to be more of a woman. 1 2 3 4 5

1 strongly disagree	2 disagree	3 unsure	4 agree	5 strongly agree

Circle One

35. When I started/will start to menstruate I was/will be very pleased. 1 2 3 4 5

36. When I started/will start to menstruate I wanted to/will want to tell all my friends. 1 2 3 4 5

Denial Category

25. Others should not be critical of a girl who is easily upset before or during her menstrual period. 1 2 3 4 5

28. Girls who complain of menstrual distress are just using that as an excuse. 1 2 3 4 5

29. Premenstrual tension is all in a girl's head. 1 2 3 4 5

30. Most girls make too much of the minor physical problems with menstruation. 1 2 3 4 5

31. I felt/would feel upset for friends or relatives to know I had started my period. 1 2 3 4 5

32. I felt/feel others might think Iwas/would be less fun if they knew I had started to menstruate. 1 2 3 4 5

Appendix D

Biographic Data

1. Name of School : _____

2. ☐ Grade 6 ☐ Grade 8

☐ Grade 7

3. Your age is : _____ 4. Birthdate_____

5. Have you had your first period yet? ☐ 1-Yes ☐ 2-No

6. If yes, how old were you when you had your first period :
(in years and months) Years_____ Months_____

7. Who lives with you at your house at this time?
(please check off all that apply to you)

☐ father
☐ step-father
☐ mother
☐ step-mother
☐ grandmother
☐ older sister
☐ younger sister
☐ aunt
☐ brother

Appendix E

Informed Consent Form

University of Alberta
Faculty of Nursing

Informed Consent Form

Project Title : Adolescent Girls' Perceptions of and Preparation for Menstruation

Dear Parents,

I am a graduate student in the Faculty of Nursing at the University of Alberta and I am conducting a research study as a requirement to finish my Master's Degree. I am interested in learning about adolescent preparation for menstruation and how adolescent girls cope with daily life activities when they are menstruating. This information will be beneficial to professionals such as the school nurse, and also to parents in their teaching about menstruation to adolescent girls.

Approval has been obtained from the school your daughter is attending to conduct the study. All the female students in your daughters' class have been selected to be in the study. Your daughter will not be identified by name on the questionnaire she fills out.

I_____, understand that if my daughter chooses to participate in the study, she will complete two questionnaires. I understand that she may withdraw from the study at any time without penalty or pressure and may leave any questions blank. I understand that the information provided by my daughter on the questionnaires will be kept confidential.

_____ _____
Parent or Guardian Date

Researcher: **Barbara-Ann Janes**
MN Candidate
Faculty of Nursing
University of Alberta

Telephone: **Home 461-6603**
School 432-8233

Supervisor: **Dr. Janice Morse**

Telephone: **School 432-6250**

Appendix F

Responses Received for the Three Short Answer Questions in the Menstrual Perceptions Research Tool

Responses Received for Question 48

Being Prepared

Grade 8

Premenarcheal

Always carry pads with you just in case.
Bring some protection just to be safe.
Just always make sure you have supplies.
Have supplies at home and at school.
Keep pads or tampons handy in a purse or something else you carry.
Always have a good supply of pads and tampons.
Make sure you have pads and tampax at home and school so when you get your period you will be prepared.
Always be ready, have a pad handy.
Time yourself at the beginning and then you can expect it around that time.
Just always keep track of when its coming and be ready about 3-4 days before it comes.
Use tampons, make sure to wear panty liner with them.
Make sure to get a box of slender and a box of super or super plus: wear Always Plus at night.
Be prepared.
Be prepared.
Be prepared.
Be prepared.
Be prepared.
Be prepared.
You can't really prepare for it because you never know.

Postmenarcheal

Have supplies ready.
Always have the right equipment at home.
Have some pads or tampons handy in case of an emergency.
Just try to think what time of the month it is and always carry a pad with you just in case.
Always be prepared.

Grade 7

Premenarcheal

Should always have a box of tampons or pads around.
Make sure you have pads or tampons eith you.
Have pads ready at home.
Always have pads around.
When you got to school you should always have supplies.
When you have them wear black pants.
Should always know when your timing of your period is so you can be ready.
Be prepared.
Be prepared.
Always be prepared.
Learn to expect it as you get older.

Grade Seven cont'd.
Use the best protection.
Have supplies ready.
Always be prepared.
be prepared with pads etc.
Make sure you have a pad at school.
Just be ready.
Be prepared and ready for your period.

Postmenarcheal
Buy some dark pants: red, black or dark pink.
When it comes about time to start wearing pads even if you don't have it.
From the day on you learn about it be ready for it.
If you are the age of 11 or up oyu should maybe take a pad to school with you, just in case.
Have your mother buy some pads just in case.
If anyone had had their period should bring pads to school. You could hide them in a purse.
Always keep pads handy.
Have some pads or tampons with you most of the time.

Grade 6
Premenarcheal
To buy a lot of maxie pads.
Always carry an extra tampon or pad.
Always have a pad with you.
Girls could bring pads just ic case your period starts in the middle of a school day.
If they bleed through their clothes they could go to the school and get some help.
Carry a pad with you at all times or have some money with you.
When you're about 12 or 13 and if you're maturing carry an extra pair of panties and a pad with you in your bag or purse. Also if you start getting jelly stuff on your panties wear a panty liner.
Always be prepared.
Be prepared.
Get things ready.

Postmenarcheal
When your in grade 5, 6 and 7 and up always carry a pad or pads with you.
That they should wear black pants so if they leak thru other people would not see it.
If you're in grade 6 or 7 be prepared by always having a spare pad or tampon with you.
Always have something.
First, if you have use a pad for the first while.

Feelings

Grade 8

Premenarcheal

Be proud.
Be proud.
Don't make it such a big deal for it a simple fact of life.

Postmenarcheal

Try not to be embarrassed.
That periods aren't that bad.
Whe it comes don't be afraid, it's really nothing, every girl has to go through it.
I would say to other girls not to worry about it, it's not as if you are going to die.
Don't be scared of it because it is just a part of life.
Don't be nervous.
Don't be scared.
Don't make it a big deal.
It's no big deal, don't make a big thing about hiding it, everyone has it.
Be proud you are growing up.
Be proud.

Grade 7

Premenarcheal

I suggest that it won't be that bad and I shouldn't be frightened when you get it.
When you get your period stay calm.
Don't worry abot it. It's part of growing up it makes you feel older, happier, prouder.
Don't get scared.
Don't get panicky.
Be calm.

Postmenarcheal

Not to be embarrassed.
Feel more proud.

Grade 6

Premenarcheal

Don't feel embarrased, every girl gets it at some time or another.
Don't be scared.

Postmenarcheal

Don't be mad at yourself when it happens.
Not to worry about anything it will be alright.

Communication

Grade 8

Premenarcheal

Talk about it.
Try to be honest and bring it in the open.
Talk about it with your mother.

Grade 8 cont'd.

Postmenarcheal

Maybe talk to school nurse or counceler about your feelings.
Talk about it with someone.
Stress no matter how shy you are talk to an adult.
You should talk to someone about it.
Talk about it in Pathfinders.
No one knows unless you tell them.
Be open.
Make sure you can talk to your mom about anything you have troubles with.

Grade 7

Premenarcheal

Don't tell people you don't want to know.
Don't tell everyone because they might not care.
Talk to your mom and make sure you understand everything.
Tell someone close to you and ask questions.

Postmenarcheal

Get someone to explain everything about your period.

Grade 6

Premenarcheal

Don't be afraid to ask questions.
Ask your mom, or a nurse. If too shy discuss it with a close friend.
One thing I would saw is ask your mother or friends and then ask your best friend to help you be prepared.
I suggest to ask your mother or friends if they know about how to become prepared.
Try to talk about it.
Not to be scared to tell a friend or ask a teacher for something.
Talk about it with someone you know has had it and someone you trust.
Once you start taking to your mom its not that bad. Don't be scared to talk to your mom.
You should talk to your mother or health nurse or just a nurse.
If you have it go to somebody who's had it or knows more about it.

Postmenarcheal

When you get your periods tell someone who could help you.
To prepare your periods you should ask someone before your period comes how it feels, like your mom or a nurse.
Will to prepare for your period you shuld ask your mom a lot about it and see a nurse and ask them about all the information.

Other

Grade 8

Premenarcheal

Explain about pregnancy and birth control.
Eat good foods not things like chips and pop.

Postmenarcheal

If you feel wet go to the bathroom but your pants may be kind of brown.
Try to act normally.
Just be yourself and preople will not notice you are having your period.
Keep clean and change your pad/tampon regularly so you will not stink.
Ignore pad and do regular activities.
Try and do the same activities you usually do.
You can get used to it but sometimes it gets in the way.

Grade 7

Prememarcheal

Never stop playing sports or activities because you feel your periods coming.

Postmenarcheal

To keep bathing.
Shower or bath.
Stay in active activities.

Grade 6

Premenarcheal

Getting a sciggles.
Bath or shower mostly every day because whe you have your period it is very important to stay clean.

Responses Received for Question 49

Bathroom Improvements

Grade 8

Premenarcheal

I think they should have a dispenser in each of cubicles.
Yes tampon dispenser's in each private bathroom cubicle.
Have small dispensers in each cubicle so when getting pad or tampons it is not embarrassing to others.
By making a pad dispenser in each cubicle.
Yes have pads in each cubicle.
Not having one dispenser for everyone, have one in each cubicle.
They could make the dispenser not so noticeable.
Place dispensers withen the cubicles to avoid embarrassment and public events.
Maybe cover the cracks on the doors to the stalls.

Postmenarcheal

The bathroom should have a dispenser in each cubicle.
Put the dispenser in the cubicles.
Yes they should put the dispensers inside each separate bathroom.
Have at least one cubicle with a pad dispenser inside.
Yes by having units or machines there.
Don't put pad dispensers where everyone can see them.
The pad dispenser should be in the cubicles.
The doors shouldn't have cracks in them.
They should be more closed.
Cleaner bathrooms.
The dispenser should lable which part is for pads and which part for tampons.
Have a disposal in the cubicle.
The garbage cans for the pads should be kept in the cubicles so it would be easier to be thrown out.
Have little garbage cans.
The dispensers wouldn't close so loudly.
Have dispenser in the cubicle.
Have the pad dispensers in the cubicles.
Having dispenser in cubicles.
Have dispensers in each of the cubicle.
Putting a dispenser in every stall.
The school could put pads and tampax in the washroom facilities because it's really embarrassing going to the office to ask for it.
They could put the machines in separate cubicles.
Put dispensers inside each cubicle.
Put the things where you get the pads and tampons from into the bathroom stall.
They could put supplies in each washroom cubicle then the girls will not feel embarrassed about getting one.
Could put the pad dispenser in the bathroom cubicle.
There should be a machine in every cubicle.
They should always be filled.
A machine that is hardly ever empty.
They should make sure the dispensers work.

Grade 8 cont'd.
A machine that works.

Grade 7
Premenarcheal
Place where you can put them in after.
Dispenser in at least 2 cubicles.
Yes their could be a pad dispenser in the washroom cubicle.
Yes by maybe putting pad dispensers in each bathroom so you'd feel less embarrassed to get one.
Put despenser in each cubicle.
Yes I think they should because most of the stuff in the bathrooms don't work.
Make sure the pads are in the dispenser.
Yes keep the dispenser full at all times.
I think the bathrooms should have the dispenser in the cubicles.
I think that in the bathroom they could make the pad unit in the cubicles so no one would see you getting a pad out because it is embarrassing.
They should have pads in every cubicle.
The pad dispenser or machine could be put inside the bathroom cubicles.
The pad dispensers should work.
The bathrooms should be changed because they should fix the pad dispenser.
Just make sure there are pads in the dispenser.
Keep the bathrooms clean.

Postmenarcheal
Yes because everything is out in the open, they should put things inside the washroom cubicles.
Should be changed because the pad dispenser doesn't work in the girls washroom.
By fixing the pad dispensers in the bathroom.
Machine is always empty or broken.
We don't have a thing to put used pads in.
Have someplace within the cubicle to throw away your pads besides the garbage can.
The bathrooms have no napkin disposal.
In the bathroom there should be a private place to get rid of the old tampon.

Grade 6
Premenarcheal
They should put a disposal in each cubicle.
They could put disposals in the cubicles.
Disposals in the cubicles.
Yes if they had a pad disposal in each cubicle.
Have a pad machine in each cubicle so you don't have to get your pad in front of everyone.
Have pad disposals in each little washroom compartment instead of out in the open.
Tampon thing in cubicles too.
Dispenser in each cubicle.
Make sure the machine is working at all times.
Have something in bathrooms that works.
Have machine working.

Grade 6 cont'd.

In our school I think they should make the pad machine so wouldn't have to go to the staff washrooms.
Pad dispenser should work.
Pad dispenser should always be full.
Should always have the the pad and tampon machines full.
Bathrooms should have a place were you can buy pads or tampons.
Should sell tampons.
Yes they should have a few more pad dispensers.
and pad disposals.
Yes in the bathroom the pad machine is broken and there is only one that I know about.
Yes our school has one dispenser, one that does not work, they should many more dispensers than that.
Yes, our bathroom machine hasn't worked in years and I would feel very more comfortable if it was changed and working.
If they would fill the machine more often.
Yes by putting dispensers in each cubicle.
Yes maybe have tampons and pad machine in the bathrom not out in the open.
Lets say there is no pad disposal the school can put one in.
A place where you can disposal them instead of the garbage can.
They should have the pad machine inside the bathroom cubicle.

Postmenarcheal

We only have one disposal and
A machine that doesn't work.
Yes because they should have a box in the bathrooms for the girls.
Yes they could have garbages for the pad when they are done.

Changing Room Improvements

Grade 8

Premenarcheal

More separate change rooms for privacy.
Have separate change rooms for each girl so you don't have to change in the open.

Postmenarcheal

Have separate changing rooms with dispensers.
Yes more privacy for girls if they don't want to change in front of everyone.
Make change rooms more private.
Change rooms could have more than one bathroom.
Have enough cubicle space for everyone so they don't have to be in the open.
It should be more private.
More private.

Grade 7

Premenarcheal

Get more private cubicles.
Yes more closed in privacy.

Grade 6

Premenarcheal

Yes the change rooms also should have pad dispensers along with the bathrooms.
Yes there should be a pad dispenser in the change room.
Yes it give you pivacy.

Postmenarcheal

Yes something in change room that works so girls can get some pads.
Put one of those things that give out tampons and pads in the changing room that works.
Yes they could have closed in bathrooms.
Well you could get more privacy it would be better because you could change and no one would know you have your periods.

Yes Comments With No Recommendations

Grade 8

Postmenarcheal

Yes.
Yes But I don't know how exactly.

Grade 7

Premenarcheal

Yes because if someone comes in the bathroom and you don't like them and they see you have your period, you could get upset.
Yes because someone might see your tampon and tell everyone.
Yes.
Yes they are so open anyone could walk in at any time.

Grade 6

Premenarcheal

Yes because if they don't feel comfortable they may lose control.
Yes because they always leave the door open and people can see you.
Yes I do because if everyone was around you would feel embarrassed.

Postmenarcheal

Yes because they shouldn't have to worry about anything.

Lockers

Grade 8

Postmenarcheal

Have larger lockers.

Grade 6

Premenarcheal

I think we should be able to have our own lockers to keep our personal things in.

Grade 6 cont'd.

Postmenarcheal

Yes I think so because someone might see what you got in the lockers and their probably going to spread it around the school.

Other

Grade 8

I don't think that you should have to attend to gym. It's too embarrassing.
The breaks are too short to run to the washroom; in case you have gym its difficult.

Grade 6

Premenarcheal

Also if you could go out of class when ever you wanted to check.
Yes I do because everyone around you would feel embarrassed.

Postmenarcheal

Can you go to the next room please.

No Improvements Needed

Grade 8

Premenarcheal

I think they are just fine the way they are.
No.

Postmenarcheal

No, if a person feels discomfortable with her period there isn't much you can do.
No.
No they are just fine now.
No they are just fine.
No.
Not really cause you don't need flowers, sofa, chiar etc. to feel comfortable, you need the girls to understand.

Grade 7

Premenarcheal

It's just fine how it is.
No at least not at our school. We can have complete privacy if we want to.
I really don't think it should be because we shouldn't change all that around becauase some girls are on their period.
No.
No.
It really wouldn't mater to me.
No it's fine the way it is.

Postmenarcheal

No.
No.
No.

Grade 6

Premenarcheal

No, I don't think any changes are needed.

No.

Postmenarcheal

No. (post)

Responses Received for Question 50

Part A

Names
- Freddy=2
- Charlie or Bob=1
- Aunt Tilley,Tilley=2
- Auntie=1
- friend=1
- $.50=1

Timing/Regularity
- that time of the month=4
- monthly dots=1
- monthly=1
- once-a-month=1
- that time=1
- monthly bill=2

Maturity
- growing up=2

Symptoms
- dot=2

Implication (with a knowing look)
- "It"=7
- the thing=2

Negative Connations
- rags=9
- the curse=1

Abbreviations
- P=1
- DD=1
- P.D.=2

Part B

Symptoms
floating down a red river=4
red brick fire station=1
red water fall=2
red dump ocean=1
red stuff=1
dot=6
slosh=4

Timing
monthly deposit=1
monthly bill=1

Abbreviations
P=1
P.D.=2

Implications (with a knowing look)
"your thing" =3
"it" =6

Names
friend=1

Negative Connations
rags=11
the curse=2
vampire=1
shits=1
Dooms day=1
downer=1

Appendix G

Questions Asked During the Question and Answer Period

Questions Asked During Question and Answer Period

Timing

Grade 8

What if your period always comes late and lasts for a long time?
When does menstruation stop? What is it called?
What if you don't have your period every month?
Is it normal for your period to come about every 2 months or a week or a couple day early or late?
Is it normal for you to sometimes skip your period?
At what age do you go into meno-pause?
How can I tell exactly when my period is coming?
Is it normal to skip a couple of months once in a while even though you've had your period for a year and a half or two already?
Is it o.k. if you get your period, when you are 16 or so?
How can you tell if your period is done, because it use to last 8-10 days then 7 now I don't know because sometimes I leak a bit after I take a tampon out?
If your period comes late what's wrong?
I am always a little late for my period is this normal?
Is it o.k. if you have your period twise in one month?
Sometimes my period skips months so I can't really tell when I'm going to get it. How do I tell?
Why does your period last for one week?
How old were you when you had your period?

Grade 7

How old are you when you get your first period?
At what age do you usually start expecting period?
What age should you start worrying if you don't have your period?
What is the average age you start your period?
If you stop having your period does it mean your pregnant?
How do you know its coming?
Do all girls get their period?
What is menopause?

Grade 6

How old are girls usually when they have their first period?
About what is the average age for having periods?
About how often do you get your periods or how far apart are they?
How can you tell that you are going to have your period?
Do some girls never get their period?
What is the age to get your period between what?
What age does your (the) periods start?
When do you start?
If you have had your period and you don't get it in one month does that mean anything?
When do you know your period is coming?

Supplies

Grade 8

What do you feel more comfortable with tampon or pad?
Are tampax unhealthy?
How did you manage to get a tampon in the first time? Did it hurt? Did you use your finger? Did it make you proud?
What if the string on the tampons breaks?
What do tampons feel like?
Is there such a disease related to tampon using called P.H.? What is the disease called?
Do you wear pads or tampons? How old were you?
What is the disease related to using tampons?
I have tried tampons because I find pads uncomfortable but tampons seem difficult to use? What do you suggest I do ?
What is TSS? What percentage is there that I can get it?

Grade 7

How can those thin pads hold all the wetness?
Is it true about something called Toxic....?
How do you use tampons and stuff like that?
What do people in foreign countries use like non industrialized countries?
What age do you think is appropriate to wear tampons?
When you first have your period would it be better to use tampons?
What did the pioneer woman use?
If you use tampons is it true that your not a virgin after that?
I was wondering who got the idea of inventing pads and tampons?

Grade 6

Why are tampons only used for swimming?
Are tampons safe?
Do you have to be a certain age for tampons; do you have to be developed in certain more ways?
Is it your choice whether or not you where pads?
Are there all different sizes of pads and tampons?
What is the regular amount you should change your pad or tampon?

Symptoms

Grade 8

Does it hurt?
Did your period make you moody?

Grade 7

What does your period really feel like?
Does a lot of blood come out and if so do you get a lot and as you get older is their not much blood?
Do cramps come before the period?
If you have cramps of ten, does it mean you will have your period?
Do headaches also come with cramps when you have your period?
Is it true that people get moody or sick during menstruation?

Grade 7 cont'd.

Does it hurt when you menstruate?
Can you feel it when you start your period?
Are there side effects?
Will you lose time at school not feeling well?
Do they go when you sleep as well?
What are the first signs of period?

Grade 6

How does it feel to have your period?
Does menstruating hurt?
Will the cramps be very bad?
How did you feel when you got your period?
Why do we have cramps?
Does it hurt?
If you get less blood in one period than another does it mean anything?

Coping

Grade 8

What should you do if your period comes on your clothes at school?
How would you take a bath or go swimming when you got your period?
What can prevent menstrual odor?
Do you have to go to the bathroom more often with your period?
How can you descretely go to the washroom without others noticing you are carrying something (purse) that you normally don't?
Is there any way of protecting your clothing?
How can I make my period more comfortable?
How can you stop the pad from slipping and leaking through your pants?

Grade 7

What should you do if you get your period in class?
What do you do if you are too embarrassed to ask your teacher?
What if there are no tampons in the pad dispenser?
What if you're too embarrassed to ask the nurse or secretary for a pad?

Grade 6

My concern is that my friends wil make fun of me if I get my period. What should I do if this happens?
How do you act when you have a period?
If we are not prepared for our period what do we do?
How do you take a shower while having your period?

Communication

Grade 8

Do you tell other people when you are having your period?
Who do you think I should tell if I had my period?

Grade 7

Some girls ask me "do you have your period" and I'll say if I do or not, I can't keep my mouth shut, what should I do to stop that?
Who do you tell first that you have it?

Grade 6

Will people see your having period?
What if your a bit afraid to talk to your mom or dad?
What are some other names people call periods?
Can guys notice if you have your period? I need to know.
Can other people tell that you are wearing a pad?

Sexuality

Grade 8

Is birth control good?
If you make love when can you get pregnant? When can and can't you?
I'm pregnant what do I do?
Is birth control a good way out of pregnancy?
A boy told me that you can't get pregnant if your period was just over when you had sex. I didn't believe him, was I right?
Can you have sex while you have your period?
How did it feel the first time you had sex ?Or are you a virgin?
If you were to do it would you get pregnant with or without?
What age can you have sex at?
What do you do on your first date? Do you do it, that's what they tell me so I did it, is it right?

Grade 6

Why can you only get pregnant when you have your periods?

General Knowledge

Grade 8

What is it?
Is it o.k. if you don't menstruate after a rough sport during the period?
Can boys have there rags?
Are you having your period now?
What are hemmorroids? Do they hurt? Why do you get them? What is Preparation H? What does it do?
The first time I got my period was on Friday. I wasn't in school.
Why do girls have bigger boobs than boys?
If you have constipation and your having a difficult task, will you push it (tampon) out?

Grade 7

Why does it have to happen, I know why the blood discharges but I wish it didn't?
Are you supposed to eat anything specific?
Is swimming bad because of the chlorine?

Grade 6

Do you lose sleep while having your period?
Is there certain activities that you can't do?
I find it very difficult to go swimming with pads and I do not wish to use tampons so I don't go swimming.
Why do we have our periods?
Do boys have anything like periods?